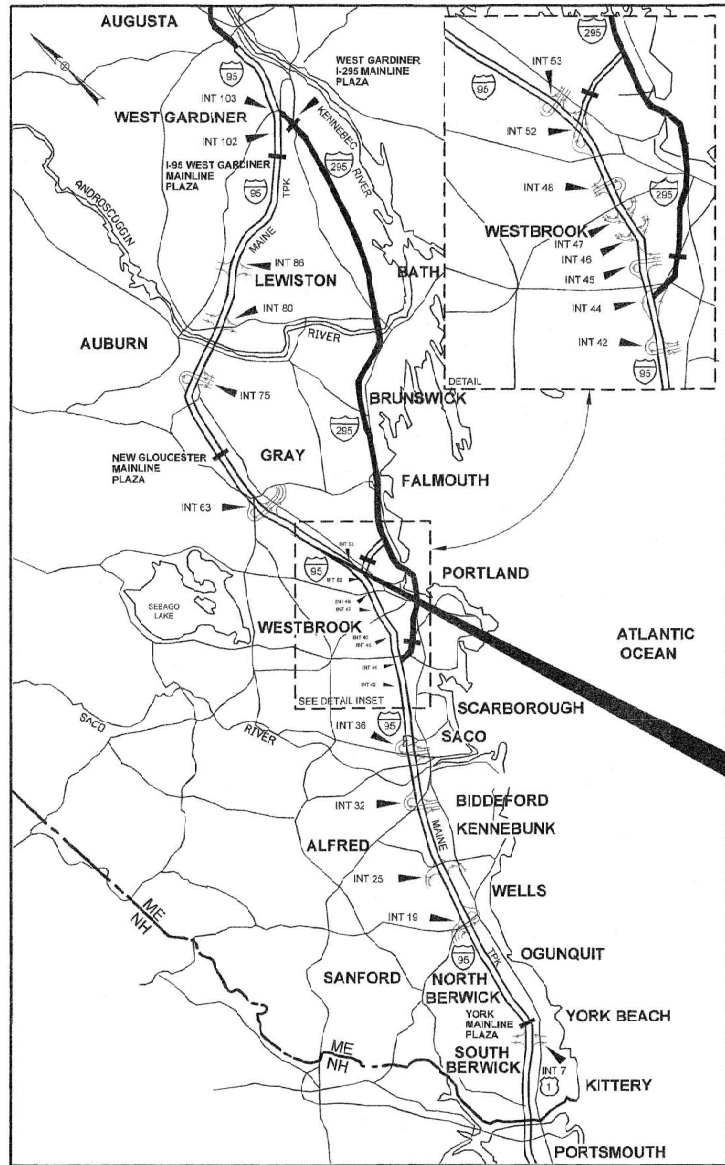


Date: 4/5/2024

Filename: 001\_Title Sheet.dgn



LOCATION MAP



THE GOLD STAR MEMORIAL HIGHWAY

# MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR  
 MICHAEL J. CIANCHETTE, VICE CHAIR  
 JANE L. LINCOLN, MEMBER  
 THOMAS J. ZUKE, MEMBER  
 ANDREW MCLEAN, MEMBER  
 BRUCE VAN NOTE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

CONTRACT 2024.11  
 CUMBERLAND SERVICE PLAZA FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8

## CONTRACT 2024.11 CUMBERLAND SERVICE PLAZA FUEL SYSTEM REPLACEMENT SOUTHBOUND MM 58.8

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3	GENERAL NOTES
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CONTRACT 2024.11

# HNTB

APPROVED: MAINE TURNPIKE AUTHORITY

*Peter S. Merfeld*  
 PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER  
 DATE: 04-11-24

*Stephen R. Tartre*  
 STEPHEN R. TARTRE, P.E. - CHIEF ENGINEER/DIRECTOR OF ENGINEERING  
 DATE: 4/11/24

STATE OF MAINE  
 HUSEYIN SEVINGCIL  
 No. 17364  
 LICENSED PROFESSIONAL ENGINEER  
 Huseyin Sevincgil, P.E.  
 Greenman-Pedersen, Inc.  
 4/12/2024

SHEETS 22-40  
*Huseyin Sevincgil*  
 4/12/24

STATE OF MAINE  
 JOHN G. RIZZO, JR.  
 No. 16205  
 LICENSED PROFESSIONAL ENGINEER  
 John G. Rizzo, Jr., P.E.  
 Greenman-Pedersen, Inc.  
 4/12/2024

SHEETS 41-48  
*John G. Rizzo, Jr.*  
 4/12/24

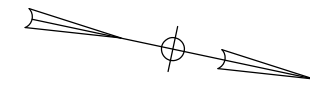
STATE OF MAINE  
 TIMOTHY R. COTE  
 No. 10571  
 LICENSED PROFESSIONAL ENGINEER  
 TIMOTHY R. COTE, P.E.  
 VICE PRESIDENT

*Timothy R. Cote*  
 DATE: 4/11/2024

SHEETS 1-21







PERIMETER RD  
 CURVE DATA #2  
 PI = 212+19.96  
 D = 22°33'26.8"  
 Δ = 82°05'35.6" Rt.  
 R = 254.00'  
 L = 363.93'  
 T = 221.16'  
 E = 82.79'

CONTROL POINT#2  
 NAIL SET IN UTILITY POLE  
 N= 358520.1519  
 E= 2912218.2069  
 ELEV. = 308.74  
 STA. 209+38.12, LT. 148.67'

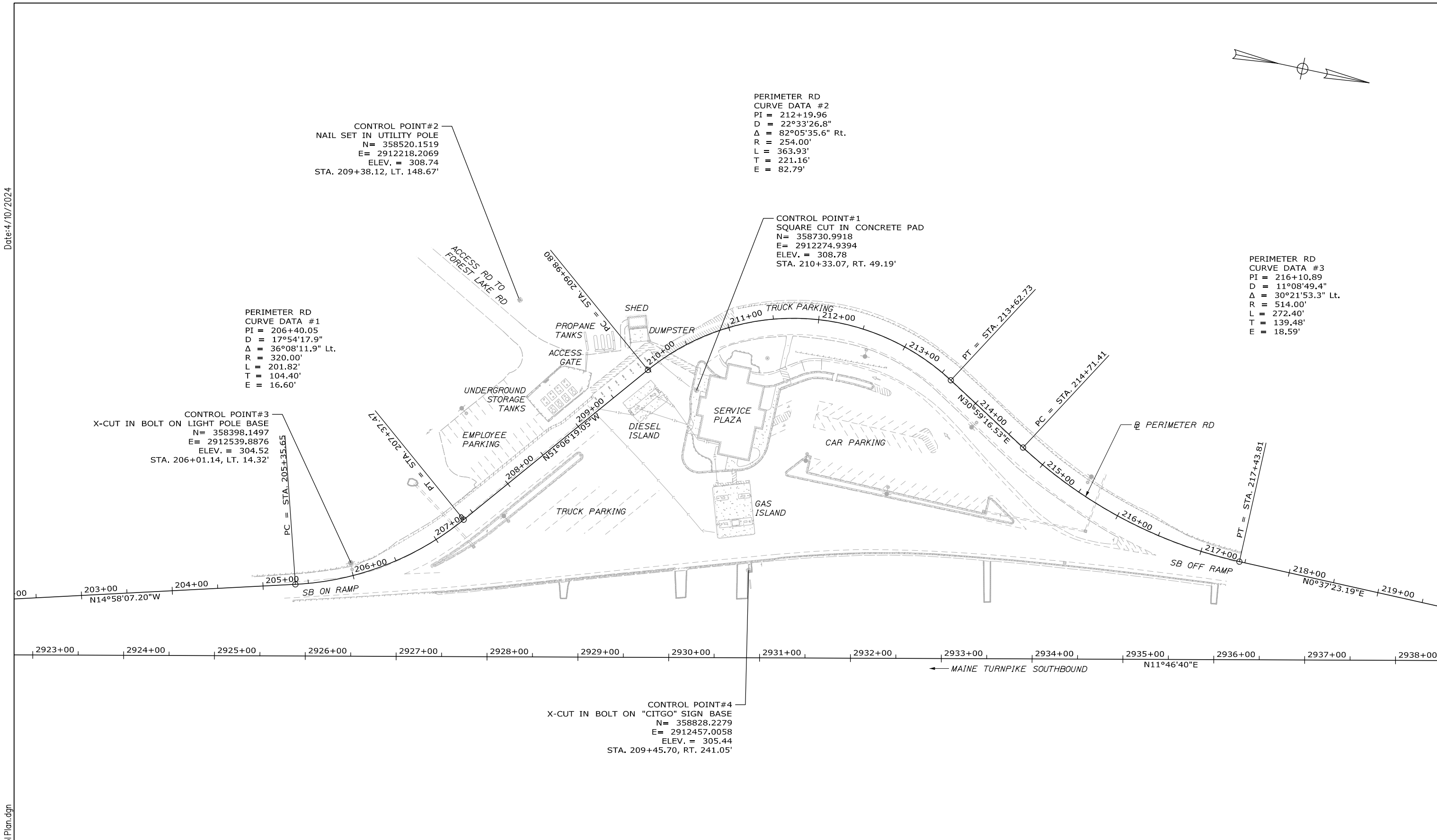
CONTROL POINT#1  
 SQUARE CUT IN CONCRETE PAD  
 N= 358730.9918  
 E= 2912274.9394  
 ELEV. = 308.78  
 STA. 210+33.07, RT. 49.19'

PERIMETER RD  
 CURVE DATA #3  
 PI = 216+10.89  
 D = 11°08'49.4"  
 Δ = 30°21'53.3" Lt.  
 R = 514.00'  
 L = 272.40'  
 T = 139.48'  
 E = 18.59'

PERIMETER RD  
 CURVE DATA #1  
 PI = 206+40.05  
 D = 17°54'17.9"  
 Δ = 36°08'11.9" Lt.  
 R = 320.00'  
 L = 201.82'  
 T = 104.40'  
 E = 16.60'

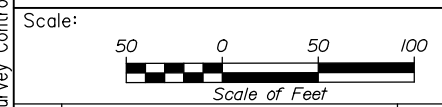
CONTROL POINT#3  
 X-CUT IN BOLT ON LIGHT POLE BASE  
 N= 358398.1497  
 E= 2912539.8876  
 ELEV. = 304.52  
 STA. 206+01.14, LT. 14.32'

CONTROL POINT#4  
 X-CUT IN BOLT ON "CITGO" SIGN BASE  
 N= 358828.2279  
 E= 2912457.0058  
 ELEV. = 305.44  
 STA. 209+45.70, RT. 241.05'



Date: 4/10/2024

Filename: 004\_Survey\_Control\_Plan.dgn



No.	Revision	By	Date


Designed by:

HNTB

	By	Date		By	Date
Designed	PEM	4\24	Checked	CDH	4\24
Drawn	PEM	4\24	In Charge of	TRC	4\24

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.



THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

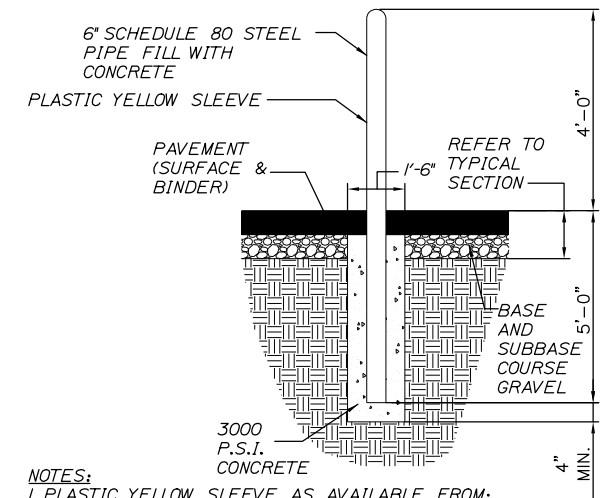
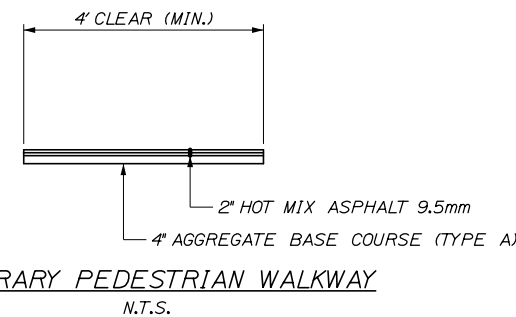
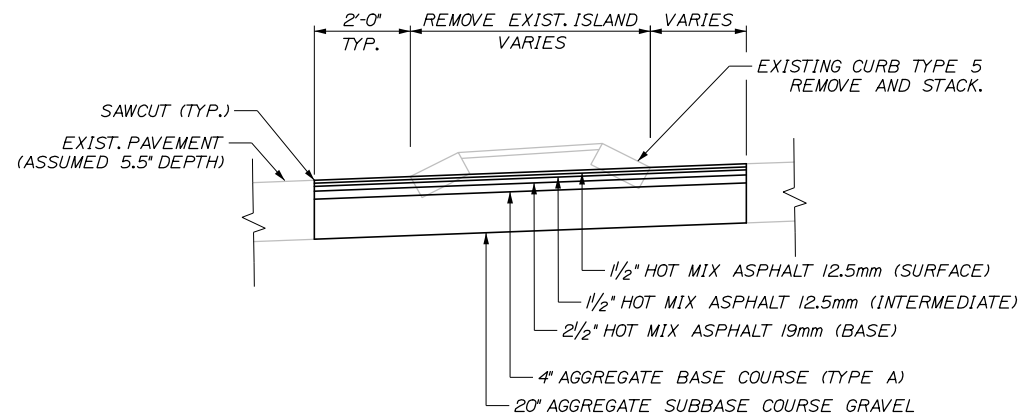
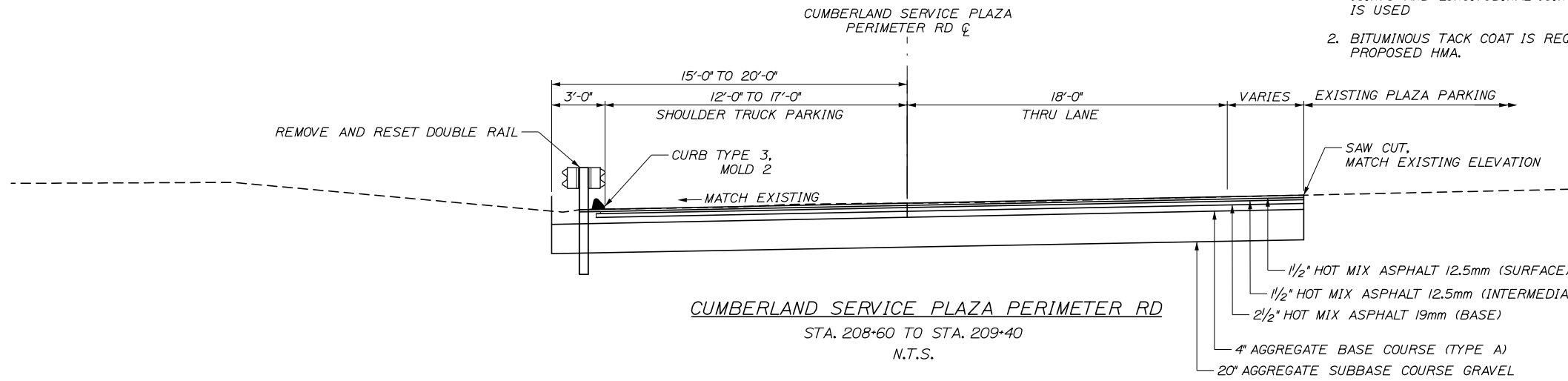
CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 SURVEY CONTROL PLAN

SHEET NUMBER: SP-01  
 CONTRACT: 2024.11  
 4 OF 48

Date: 4/10/2024

**NOTES:**

1. A COATING OF HOT RUBBERIZED ASPHALT (ASTM D6690 TYPE IV) SHALL BE APPLIED AT THE TOP SURFACE LIFT TO ALL TRANSVERSE BUTT JOINTS AND LONGITUDINAL JOINTS EXCEPT WHERE THE NOTCHED WEDGE IS USED
2. BITUMINOUS TACK COAT IS REQUIRED BETWEEN EXISTING PAVEMENT AND PROPOSED HMA.



**NOTES:**

1. PLASTIC YELLOW SLEEVE AS AVAILABLE FROM:

IDEAL SHIELD, LLC  
DETROIT, MICHIGAN  
(313) 842-7290

LIBERTY EQUIPMENT SALES  
HOUSTON, TEXAS  
(218) 987-8708  
(888) 987-8708

OR ENGINEER APPROVED EQUIVALENT.

2. PAYMENT FOR SITE BOLLARD INSTALLATION SHALL BE MADE UNDER ITEM 832.41 TYPE A STEEL SITE BOLLARD.

**SITE BOLLARD DETAIL**  
N.T.S.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

**HNTB**

	By	Date		By	Date
Designed	PEM	4\24	Checked	CDH	4\24
Drawn	PEM	4\24	In Charge of	TRC	4\24

HNTB CORPORATION  
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FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

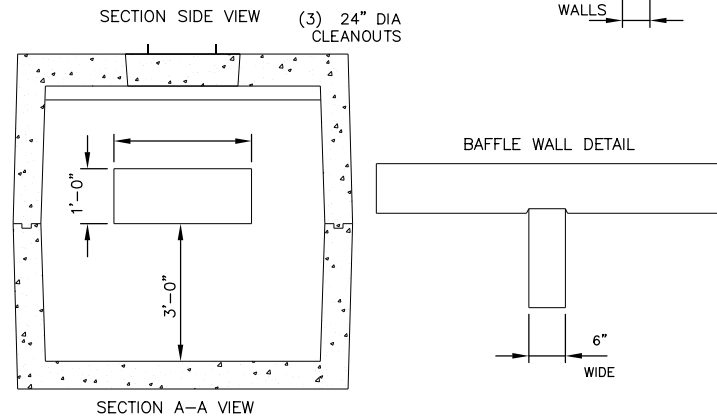
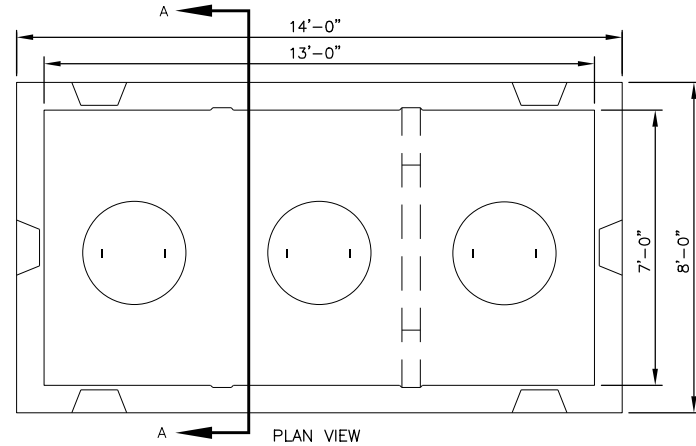
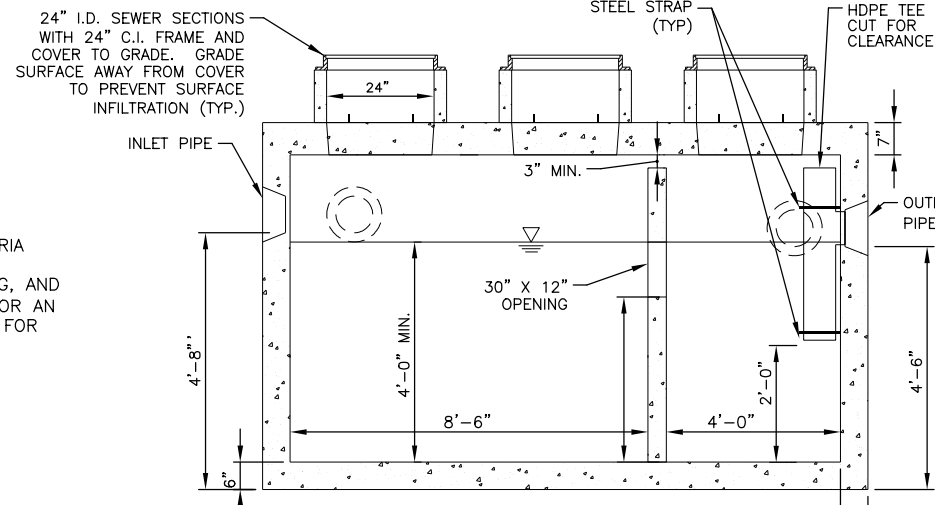
CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
SITE TYPICAL SECTIONS

SHEET NUMBER: TS-01  
CONTRACT: 2024.11  
5 OF 48

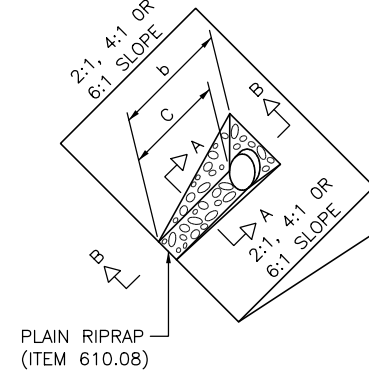
Filename: 005\_Site Dtl1.dgn

Date: 4/10/2024

- NOTES:**
1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
  2. DESIGNED FOR H-20 LOADING.
  3. TONGUE & GROOVE JOINT SEALED WITH BUTYL RESIN.
  4. PERMANENT POOL SIZING BASED ON MAINE DEP CRITERIA
  5. CONTRACTOR IS RESPONSIBLE FOR DESIGN, FURNISHING, AND INSTALLATION OF OIL/WATER SEPARATOR AS DETAILED OR AN APPROVED EQUAL. REFER TO SPECIAL PROVISION 604 FOR ADDITIONAL INFORMATION.

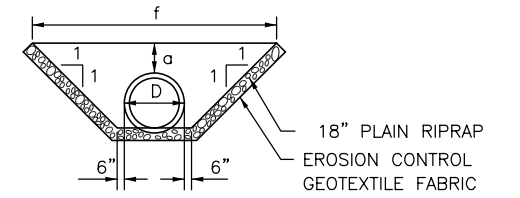
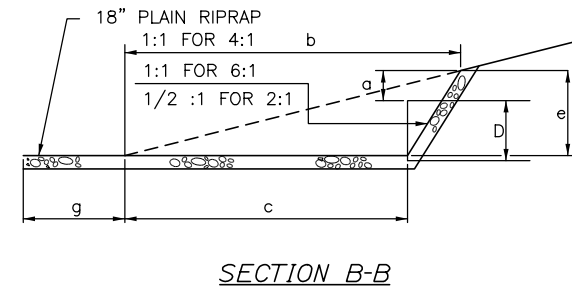


**2,500 GAL. OIL/WATER SEPARATOR DETAIL**  
N.T.S.



**DIMENSIONS FOR SLOPE OF 2:1**

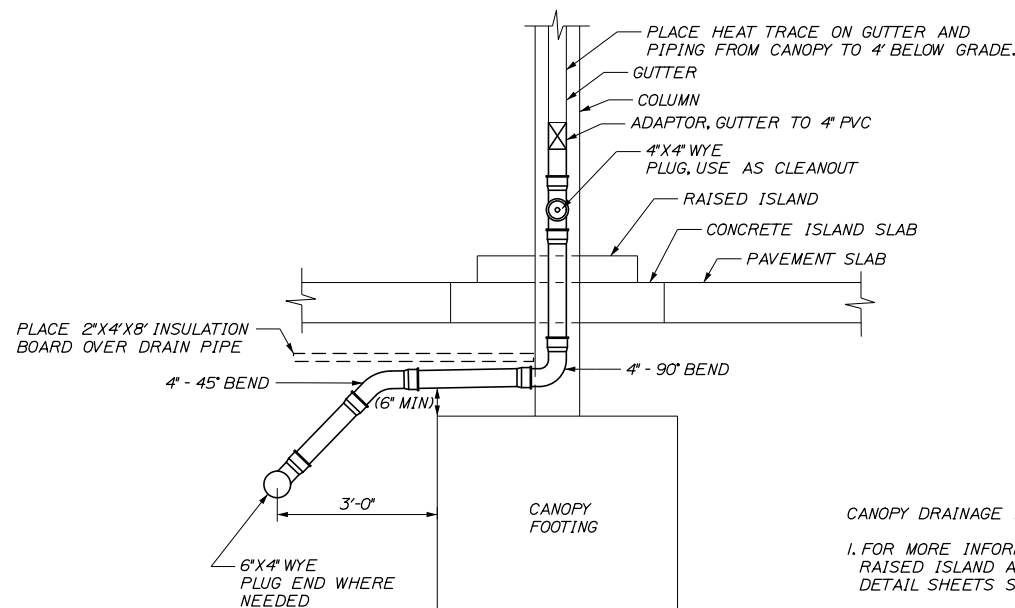
D	a (FT)	b (FT)	c (FT)	e (FT)	f (FT)	g (FT)	STONE DEPTH (FT)	STONE (CY)
12"	1.00	4.00	3.00	2.00	6.00	1.00	1.50	1.30
15"	1.00	4.50	3.37	2.25	6.75	1.63	1.50	1.70
18"	1.00	5.00	3.75	2.50	7.50	2.25	1.50	2.09
21"	1.00	5.50	4.13	2.75	8.25	2.88	1.50	2.58
24"	1.00	6.00	4.50	3.00	9.00	3.50	1.50	3.12
30"	1.00	7.00	5.25	3.50	10.50	4.75	1.50	4.33
36"	1.00	8.00	6.00	4.00	12.00	6.00	1.50	5.75
42"	1.00	9.00	6.75	4.50	13.50	7.25	1.50	7.37
48"	1.00	10.00	7.50	5.00	15.00	8.50	1.50	9.18
54"	1.00	11.00	8.25	5.50	16.50	9.75	1.50	11.19
60"	1.00	12.00	9.00	6.00	18.00	11.00	1.50	13.40
66"	1.00	13.00	9.75	6.50	19.50	12.25	1.50	15.81
72"	1.00	14.00	10.50	7.00	21.00	13.50	1.50	18.41
84"	1.00	16.00	12.00	8.00	24.00	16.00	1.50	24.22



**SECTION A-A**  
**ROADWAY CULVERT END**  
**SLOPE TREATMENT**

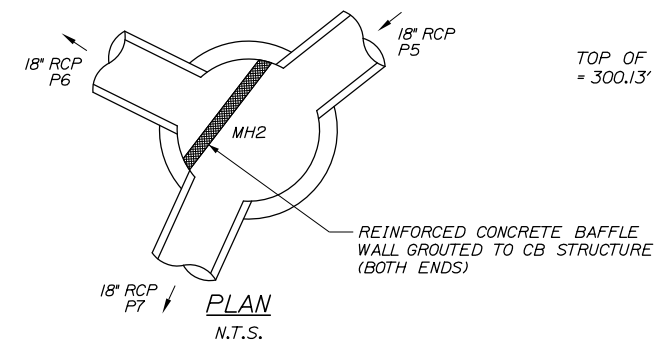
**CULVERT NOTES:**

1. THE DIMENSIONS SHOWN ARE APPROXIMATE AND MAY BE MODIFIED BY THE RESIDENT.
2. STONE QUANTITIES ARE FOR ONE END OF THE PIPE.

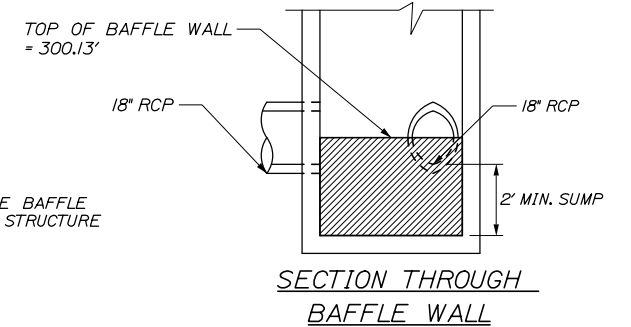


**CANOPY DRAINAGE DETAIL**  
N.T.S.

- CANOPY DRAINAGE NOTES:**
1. FOR MORE INFORMATION ON FOOTING, PAVEMENT SLAB, RAISED ISLAND AND ISLAND SLAB SEE STRUCTURAL DETAIL SHEETS S01-S04
  2. PAYMENT FOR CANOPY DRAINAGE SHALL BE INCIDENTAL TO NEW DIESEL CANOPY AND GAS ISLAND/SLAB ITEMS.



**OIL/WATER SEPARATOR DIVERSION STRUCTURE**  
N.T.S.



- NOTE:**
1. SEE DRAINAGE PLAN FOR ADDITIONAL INVERT AND GRATE ELEVATIONS.

Scale: **NOT TO SCALE**

No.	Revision	By	Date

Designed by:

**HNTB**

By	Date	By	Date
Designed	PEM 4\24	Checked	CDH 4\24
Drawn	PEM 4\24	In Charge of	TRC 4\24

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
DRAINAGE DETAILS

SHEET NUMBER: MD-01  
CONTRACT: 2024.11  
6 OF 48

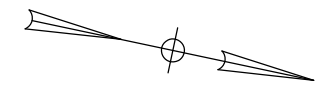


**NOTES:**

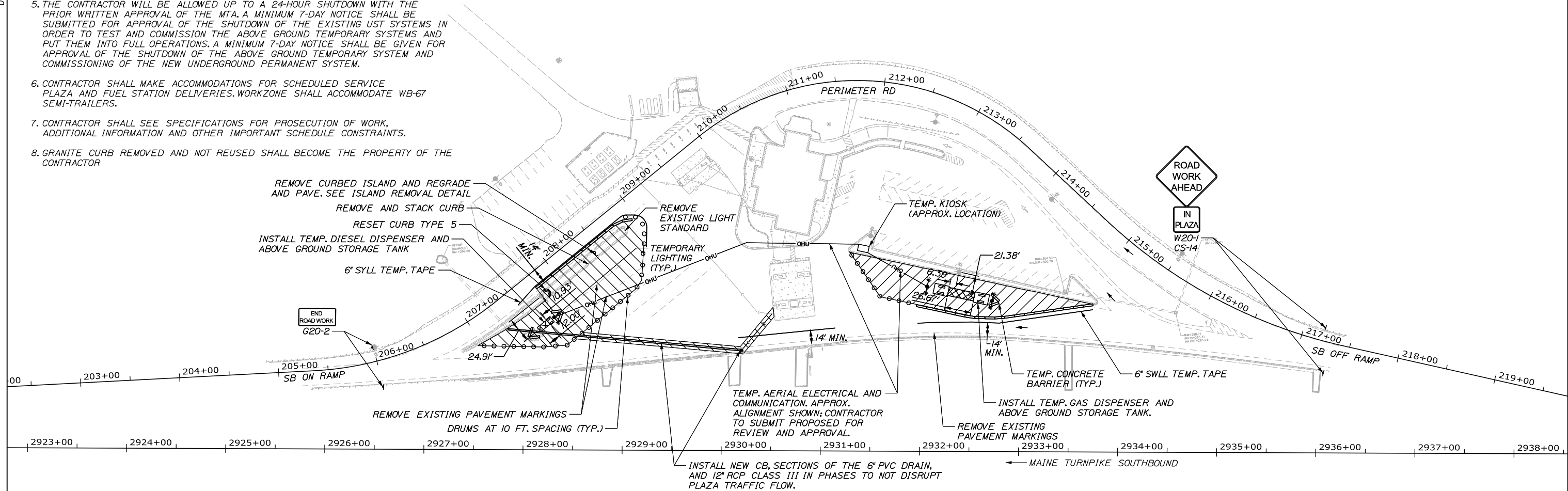
1. THE TEMPORARY FUEL SYSTEM (GAS AND DIESEL) CONSISTS OF ABOVE GROUND FUEL STORAGE TANKS, DISPENSING EQUIPMENT, ITEMS AND COMPONENTS, THAT WILL BE USED TO MAINTAIN FUELING OPERATIONS WHILE PROPOSED FUEL SYSTEMS ARE BEING REPLACED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ASPECTS PERTAINING TO THE TEMPORARY FUEL SYSTEMS, INCLUDING BUT NOT LIMITED TO, PROCUREMENT, PICKUP, SHIPPING, OFF-LOADING, SETUP, ELECTRICAL, COMMUNICATION, TEMPORARY LIGHTING, COMMISSIONING, FINAL INSTALLATION, DECOMMISSIONING, REMOVAL AND RESTORATION TO ORIGINAL CONDITION.
2. THE CONTRACTOR SHALL PROVIDE AND INSTALL TEMPORARY SUPPORTS FOR ABOVE GROUND FUEL TANKS.
3. NO DEMOLITION OF THE EXISTING UNDERGROUND FUEL TANKS AND DISPENSING SYSTEMS IS ALLOWED UNTIL THE TEMPORARY FUEL SYSTEMS ARE TESTED, COMMISSIONED AND OPERATIONAL.
4. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING PER NFPA 30A FOR EACH TEMPORARY FUEL SYSTEM:
  - 4.1 AN EMERGENCY STOP BUTTON FOR THE PUBLIC AND STATION ATTENDANT.
  - 4.2 DRY CHEMICAL 2A:40B:C FIRE EXTINGUISHER AT EACH TEMPORARY DISPENSER.
  - 4.3 CONTRACTOR TO PROVIDE AND INSTALL SHEAR VALVES FOR EACH DISPENSER IN THE EVENT OF IMPAIRMENT.
5. THE CONTRACTOR WILL BE ALLOWED UP TO A 24-HOUR SHUTDOWN WITH THE PRIOR WRITTEN APPROVAL OF THE MTA. A MINIMUM 7-DAY NOTICE SHALL BE SUBMITTED FOR APPROVAL OF THE SHUTDOWN OF THE EXISTING UST SYSTEMS IN ORDER TO TEST AND COMMISSION THE ABOVE GROUND TEMPORARY SYSTEMS AND PUT THEM INTO FULL OPERATIONS. A MINIMUM 7-DAY NOTICE SHALL BE GIVEN FOR APPROVAL OF THE SHUTDOWN OF THE ABOVE GROUND TEMPORARY SYSTEM AND COMMISSIONING OF THE NEW UNDERGROUND PERMANENT SYSTEM.
6. CONTRACTOR SHALL MAKE ACCOMMODATIONS FOR SCHEDULED SERVICE PLAZA AND FUEL STATION DELIVERIES. WORKZONE SHALL ACCOMMODATE WB-67 SEMI-TRAILERS.
7. CONTRACTOR SHALL SEE SPECIFICATIONS FOR PROSECUTION OF WORK, ADDITIONAL INFORMATION AND OTHER IMPORTANT SCHEDULE CONSTRAINTS.
8. GRANITE CURB REMOVED AND NOT REUSED SHALL BECOME THE PROPERTY OF THE CONTRACTOR

**PHASE I CONSTRUCTION:**

1. REMOVE EXISTING LIGHT STANDARD.
2. REMOVE CURBED ISLAND FROM 207+85 TO 208+85. SEE REMOVAL OF EXISTING CURBED ISLAND DETAIL ON TS-01.
3. INSTALL TEMPORARY LIGHTING AT TEMPORARY DISPENSERS. USE EXISTING LIGHTING FOR KIOSK.
4. INSTALL C.N. BROWN PROVIDED TEMPORARY KIOSK.
5. INSTALL TEMPORARY GAS AND DIESEL ABOVEGROUND STORAGE TANKS AND DISPENSERS. TEMPORARY FUELING SYSTEM TO BE COMPLETELY OPERATIONAL BEFORE CLOSING EXISTING DISPENSERS, INCLUDING POWER COMMUNICATIONS, AND POINT OF SALE.

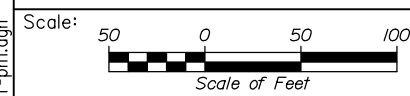


Date: 4/10/2024



**LEGEND**

- WORK AREA - PHASE I
- TEMPORARY CONCRETE BARRIER



Designed by:



HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909



**THE GOLD STAR  
MEMORIAL HIGHWAY**

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
MAINTENANCE OF TRAFFIC  
PHASE 1

No.	Revision	By	Date

	By	Date	By	Date
Designed	PEM	4\24	CDH	4\24
Drawn	PEM	4\24	TRC	4\24

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CONTRACT: 2024.11

SHEET NUMBER: MOT-01

8 OF 48

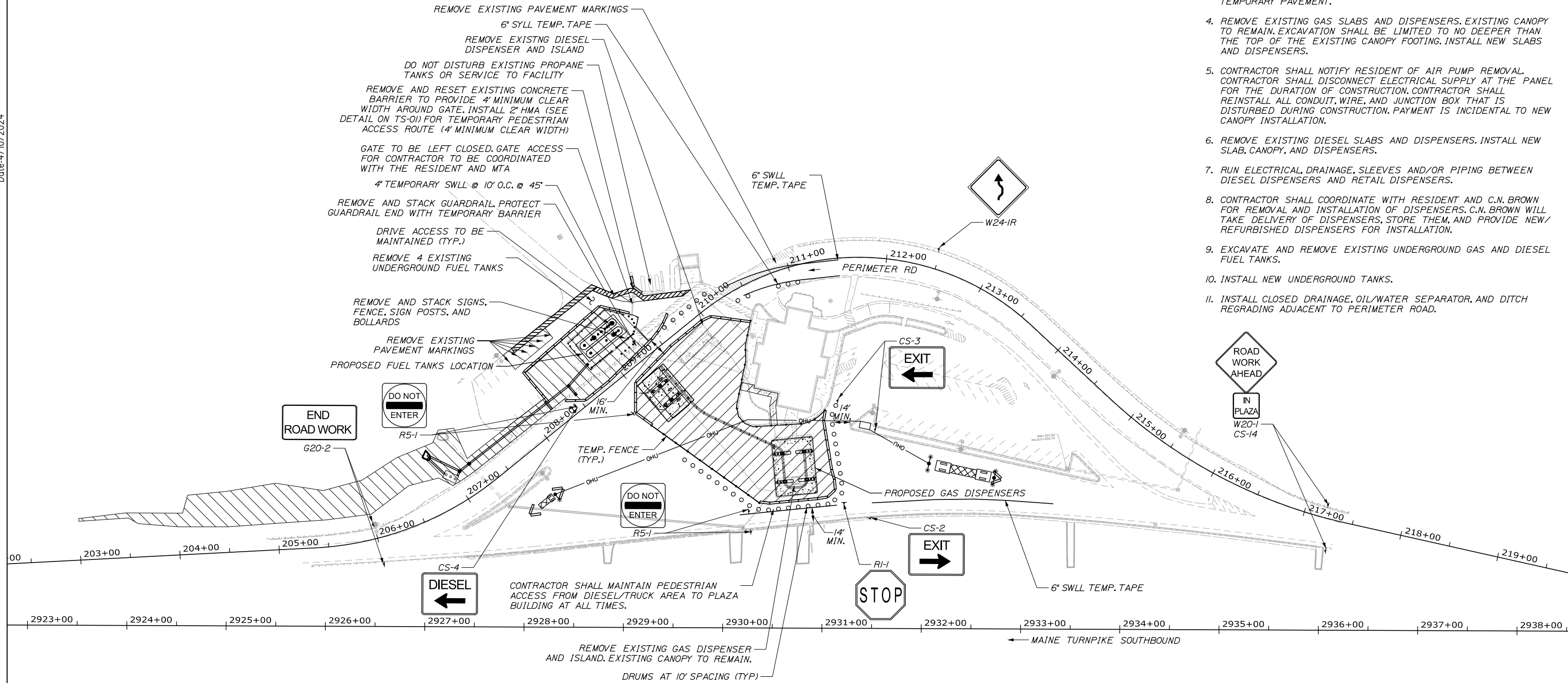
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Date: 4/10/2024

**PHASE 2 CONSTRUCTION:**

1. CLOSE EXISTING GAS AND DIESEL DISPENSERS.
2. DISCONNECT EXISTING DIESEL AND GAS FUEL SYSTEMS.
3. INSTALL TEMPORARY FENCING, TEMPORARY CONCRETE BARRIER, AND TEMPORARY PAVEMENT.
4. REMOVE EXISTING GAS SLABS AND DISPENSERS. EXISTING CANOPY TO REMAIN. EXCAVATION SHALL BE LIMITED TO NO DEEPER THAN THE TOP OF THE EXISTING CANOPY FOOTING. INSTALL NEW SLABS AND DISPENSERS.
5. CONTRACTOR SHALL NOTIFY RESIDENT OF AIR PUMP REMOVAL. CONTRACTOR SHALL DISCONNECT ELECTRICAL SUPPLY AT THE PANEL FOR THE DURATION OF CONSTRUCTION. CONTRACTOR SHALL REINSTALL ALL CONDUIT, WIRE, AND JUNCTION BOX THAT IS DISTURBED DURING CONSTRUCTION. PAYMENT IS INCIDENTAL TO NEW CANOPY INSTALLATION.
6. REMOVE EXISTING DIESEL SLABS AND DISPENSERS. INSTALL NEW SLAB, CANOPY, AND DISPENSERS.
7. RUN ELECTRICAL, DRAINAGE, SLEEVES AND/OR PIPING BETWEEN DIESEL DISPENSERS AND RETAIL DISPENSERS.
8. CONTRACTOR SHALL COORDINATE WITH RESIDENT AND C.N. BROWN FOR REMOVAL AND INSTALLATION OF DISPENSERS. C.N. BROWN WILL TAKE DELIVERY OF DISPENSERS, STORE THEM, AND PROVIDE NEW/REFURBISHED DISPENSERS FOR INSTALLATION.
9. EXCAVATE AND REMOVE EXISTING UNDERGROUND GAS AND DIESEL FUEL TANKS.
10. INSTALL NEW UNDERGROUND TANKS.
11. INSTALL CLOSED DRAINAGE, OIL/WATER SEPARATOR, AND DITCH REGRADING ADJACENT TO PERIMETER ROAD.



**LEGEND**

- WORK AREA - PHASE 2
- TEMPORARY CONCRETE BARRIER
- 6' CHAIN LINK SAFETY FENCE

**NOTE:**

1. CONTRACTOR SHALL MAKE ACCOMMODATIONS FOR SCHEDULED SERVICE PLAZA AND FUEL STATION DELIVERIES.



Designed by:



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82 Running Hill Road, Suite 201  
South Portland, ME 04106  
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FAX (207) 228-0909



**THE GOLD STAR  
MEMORIAL HIGHWAY**

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
MAINTENANCE OF TRAFFIC  
PHASE 2

No.	Revision	By	Date

	By	Date		By	Date
Designed	PEM	4\24	Checked	CDH	4\24
Drawn	PEM	4\24	In Charge of	TRC	4\24

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CONTRACT: 2024.11

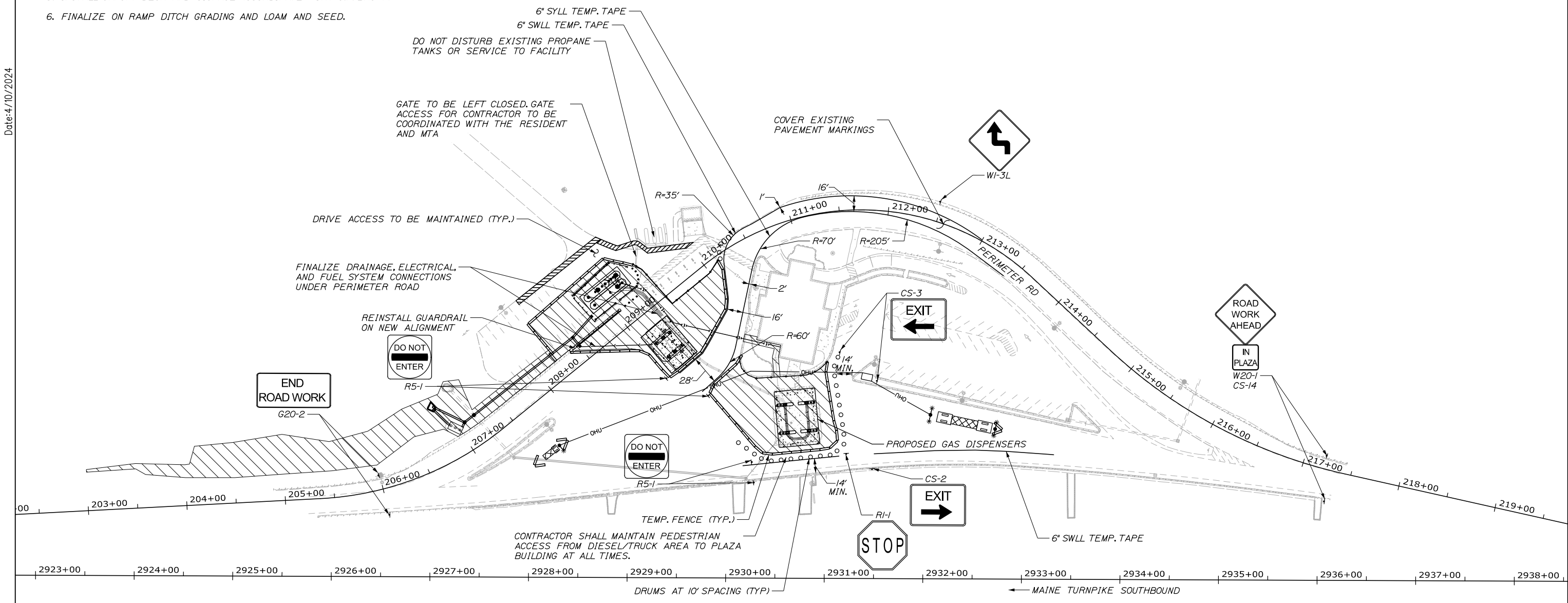
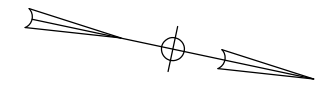
SHEET NUMBER: MOT-02

9 OF 48

Filename: 009\_MOT-ph2.dgn

**PHASE 3 CONSTRUCTION:**

1. CLOSE PERIMETER ROAD AND DIVERT TRAFFIC BETWEEN GAS AND DIESEL DISPENSERS.
2. FINALIZE DRAINAGE, ELECTRICAL, AND FUEL SYSTEM INSTALLATION UNDER PERIMETER ROAD.
3. FINALIZE UNDERGROUND STORAGE TANK TOP SLAB.
4. INSTALL DISPENSERS (COORDINATE WITH C.N. BROWN)
5. INSTALL CANOPY DECK AND SIGNAGE (COORDINATE WITH C.N. BROWN)
6. FINALIZE ON RAMP DITCH GRADING AND LOAM AND SEED.



**LEGEND**

- WORK AREA - PHASE 3
- TEMPORARY CONCRETE BARRIER
- 6' CHAIN LINK SAFETY FENCE

Date: 4/10/2024

Scale:

No.	Revision	By	Date

Designed by:

HNTB

	By	Date		By	Date
Designed	PEM	4\24	Checked	CDH	4\24
Drawn	PEM	4\24	In Charge of	TRC	4\24

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

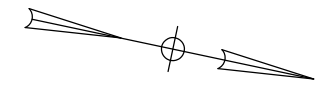
CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 MAINTENANCE OF TRAFFIC  
 PHASE 3

SHEET NUMBER: MOT-03  
 10 OF 48

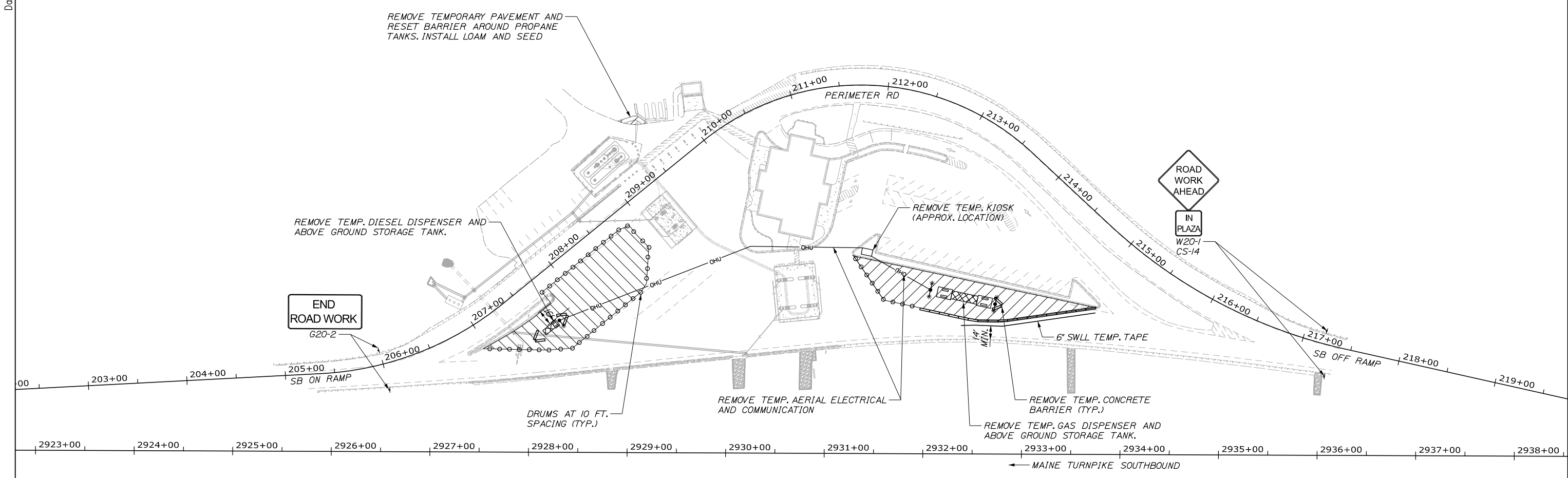
CONTRACT: 2024.11

**PHASE 4 CONSTRUCTION:**

1. DECOMMISSION AND REMOVE TEMPORARY FUEL SYSTEM, CONDUIT, KIOSK, ETC.
2. REMOVE TEMPORARY STRIPING & TEMPORARY PAVEMENT, FINAL PAVING, REINSTALL PERMANENT PAVEMENT MARKINGS INCLUDING LANE LINES AND TRUCK STALLS.
3. REMOVE ALL TEMPORARY BARRIER AND SIGNING ASSOCIATED WITH TEMPORARY FUEL SYSTEMS.

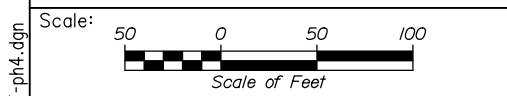


Date: 4/10/2024



**LEGEND**

- WORK AREA - PHASE 4
- TEMPORARY CONCRETE BARRIER
- 6' CHAIN LINK SAFETY FENCE



Designed by:

HNTB

No.	Revision	By	Date

	By	Date		By	Date
Designed	PEM	4\24	Checked	CDH	4\24
Drawn	PEM	4\24	In Charge of	TRC	4\24

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 MAINTENANCE OF TRAFFIC  
 PHASE 4

SHEET NUMBER: MOT-04  
 11 OF 48

CONTRACT: 2024.11

Filename: 011\_MOT-ph4.dgn



Date: 4/10/2024

**ITEM 832.41 TYPE A STEEL SITE BOLLARD**

STA. 209+41.5, 43.2' LT  
 STA. 209+42.2, 38.9' LT  
 STA. 209+41.4, 34.6' LT  
 STA. 209+39.2, 30.9' LT  
 STA. 209+35.9, 28.1' LT  
 STA. 209+27.0, 18.4' LT  
 STA. 209+22.0, 18.4' LT  
 STA. 209+17.0, 18.4' LT  
 STA. 209+12.0, 18.4' LT

**ITEM 606.3605 REMOVE, MODIFY, AND RESET SINGLE RAIL**

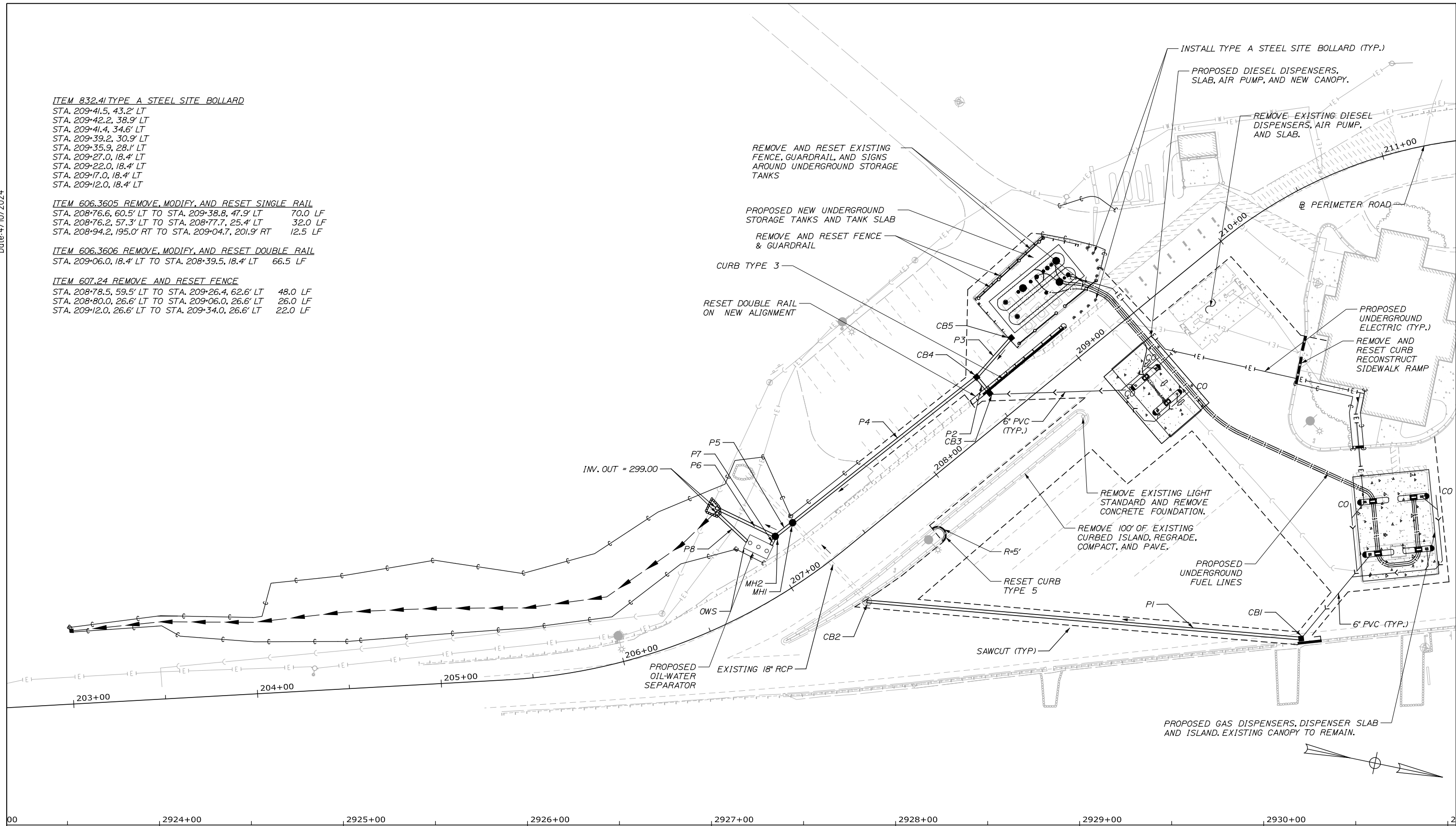
STA. 208+76.6, 60.5' LT TO STA. 209+38.8, 47.9' LT 70.0 LF  
 STA. 208+76.2, 57.3' LT TO STA. 208+77.7, 25.4' LT 32.0 LF  
 STA. 208+94.2, 195.0' RT TO STA. 209+04.7, 201.9' RT 12.5 LF

**ITEM 606.3606 REMOVE, MODIFY, AND RESET DOUBLE RAIL**

STA. 209+06.0, 18.4' LT TO STA. 208+39.5, 18.4' LT 66.5 LF

**ITEM 607.24 REMOVE AND RESET FENCE**

STA. 208+78.5, 59.5' LT TO STA. 209+26.4, 62.6' LT 48.0 LF  
 STA. 208+80.0, 26.6' LT TO STA. 209+06.0, 26.6' LT 26.0 LF  
 STA. 209+12.0, 26.6' LT TO STA. 209+34.0, 26.6' LT 22.0 LF



00 2924+00 2925+00 2926+00 2927+00 2928+00 2929+00 2930+00 2

Scale: 25 0 25 50  
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

	By	Date		By	Date
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Drawn	PEM	4\24	In Charge of	TRC	4\24

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 82 Running Hill Road, Suite 201  
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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 SITE PLAN

SHEET NUMBER: SP-01  
13 OF 48

CONTRACT: 2024.11

Date: 4/10/2024

CBI  
 STA. 208+96.9, 194.6' RT.  
 INSTALL CB TYPE BI  
 GRATE ELEV. = 306.18'  
 6" INV. IN = 301.98'  
 12" INV. OUT = 301.48'

EXIST. CB2  
 STA. 207+28.06, 29.6' RT.  
 EXIST. GRATE ELEV. = 304.37'  
 PROPOSED 12" INV. IN = 300.32'  
 EXIST. 18" INV. OUT = 300.07'

CB3  
 STA. 208+50.5, 15.8' LT.  
 INSTALL CB TYPE BI - FLAT TOP  
 GRATE ELEV. = 304.44'  
 6" INV. IN = 301.48'  
 12" INV. OUT = 301.23'

CB4  
 STA. 208+50.5, 27.1' LT.  
 INSTALL CB TYPE F6  
 GRATE ELEV. = 304.31'  
 12" INV. IN = 300.10'  
 12" INV. IN = 300.10'  
 12" INV. OUT = 300.10'

CB5  
 STA. 208+78.6, 31.6' LT.  
 INSTALL CB TYPE F6  
 GRATE ELEV. = 304.35'  
 12" INV. OUT = 300.22'

MHI  
 STA. 207+21.6, 28.9' LT.  
 INSTALL MH  
 GRATE ELEV. = 303.24'  
 INTERCEPT EXISTING 18" CULVERT  
 EXIST. 18" INV. IN. = 299.46'  
 18" INV. OUT = 299.46'

MH2  
 STA. 207+08.4, 28.3' LT.  
 INSTALL MH  
 GRATE ELEV. = 303.12'  
 18" INV. IN. = 299.42'  
 18" INV. OUT = 299.38'  
 18" INV. OUT = 299.38'

OWS  
 RIM ELEV. = 303.00'  
 STA. 206+96, 30' LT.  
 18" INV. IN. = 299.36'  
 18" INV. OUT = 299.19'

PVC CANOPY DRAINAGE  
 RETAIL GAS CANOPY TO CBI  
 INSTALL 215' X 6"

P1  
 CBI TO CB2  
 INSTALL 233' X 12" RCP

PVC CANOPY DRAINAGE  
 DIESEL CANOPY TO CB3  
 INSTALL 168' X 6"

P2  
 CB3 TO CB4  
 INSTALL 8' X 12" RCP

P3  
 CB5 TO CB4  
 INSTALL 26' X 12" RCP

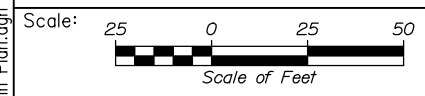
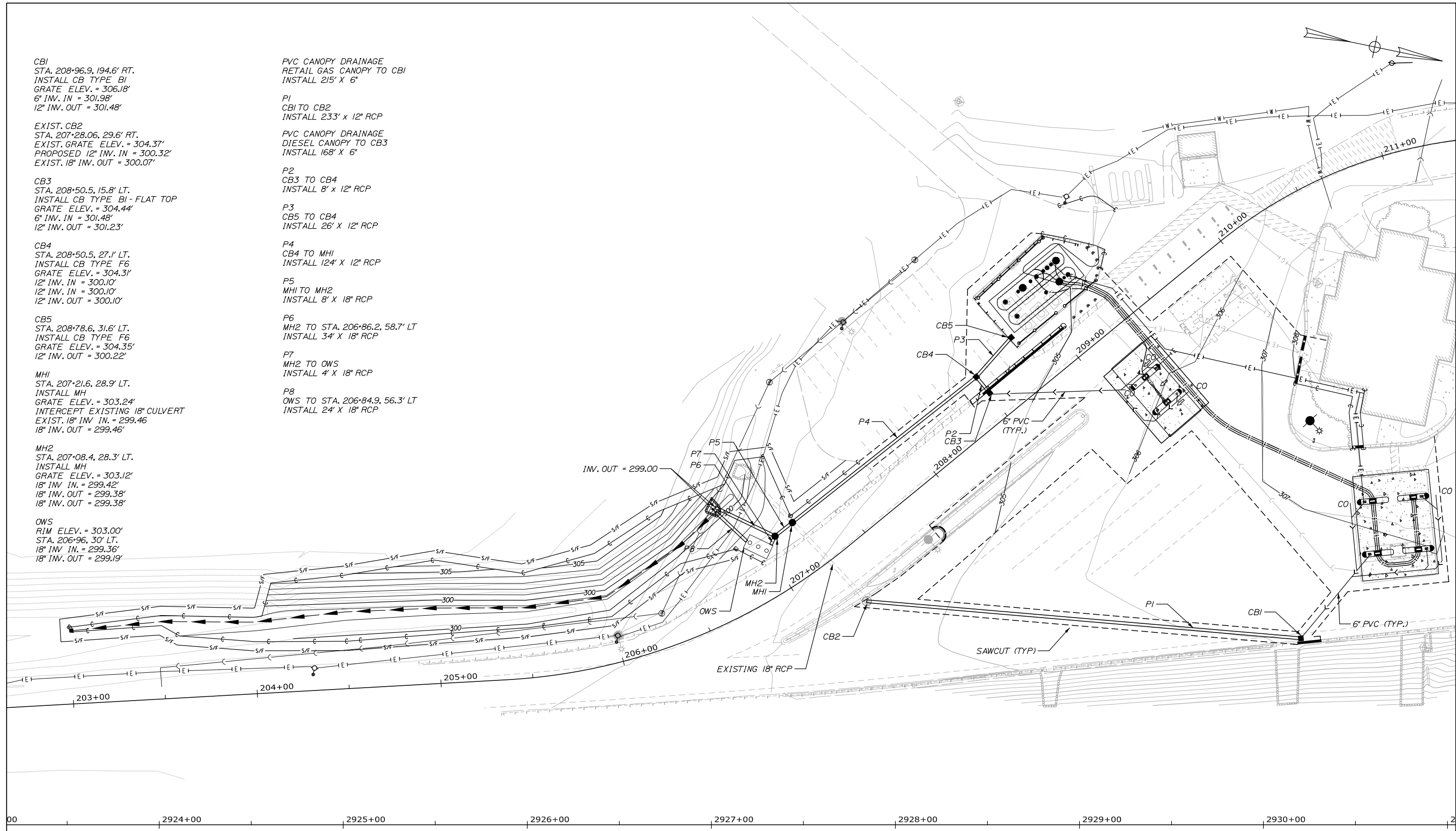
P4  
 CB4 TO MHI  
 INSTALL 124' X 12" RCP

P5  
 MHI TO MH2  
 INSTALL 8' X 18" RCP

P6  
 MH2 TO STA. 206+86.2, 58.7' LT  
 INSTALL 34' X 18" RCP

P7  
 MH2 TO OWS  
 INSTALL 4' X 18" RCP

P8  
 OWS TO STA. 206+84.9, 56.3' LT  
 INSTALL 24' X 18" RCP



No.	Revision	By	Date

Designed by:

**HNTB**

	By	Date		By	Date
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Drawn	PEM	4\24	In Charge of	TRC	4\24

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
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CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

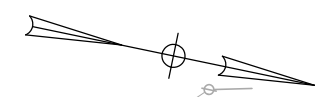
THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 DRAINAGE PLAN

SHEET NUMBER: SP-02  
 14 OF 48

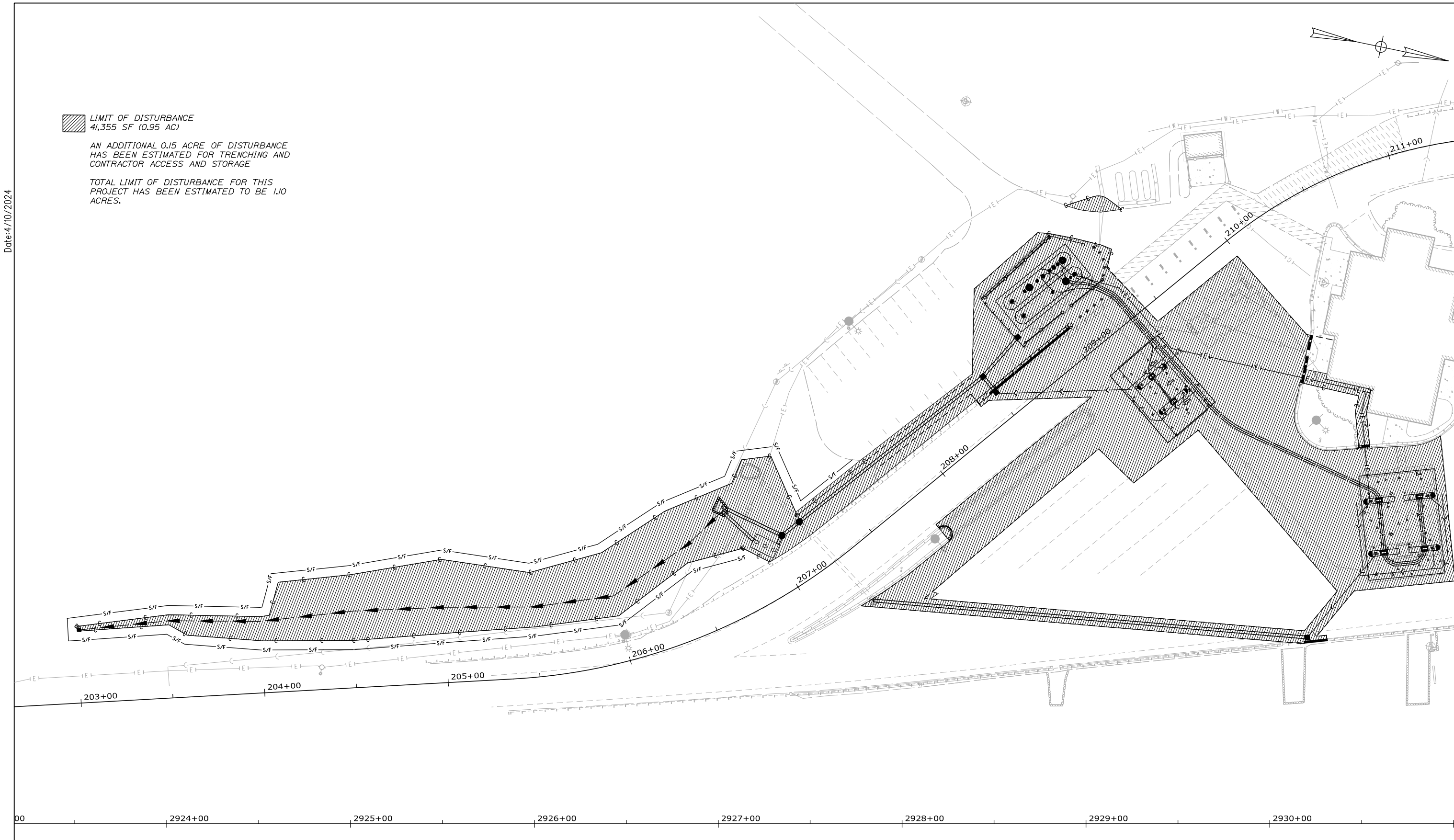
CONTRACT: 2024.11



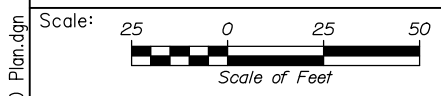
**LIMIT OF DISTURBANCE**  
41,355 SF (0.95 AC)

AN ADDITIONAL 0.15 ACRE OF DISTURBANCE  
HAS BEEN ESTIMATED FOR TRENCHING AND  
CONTRACTOR ACCESS AND STORAGE

TOTAL LIMIT OF DISTURBANCE FOR THIS  
PROJECT HAS BEEN ESTIMATED TO BE 1.10  
ACRES.



00      2924+00      2925+00      2926+00      2927+00      2928+00      2929+00      2930+00      2



Designed by:



HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
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**THE GOLD STAR  
MEMORIAL HIGHWAY**

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
LIMIT OF DISTURBANCE PLAN

No.	Revision	By	Date

	By	Date		By	Date
Designed	PEM	4\24	Checked	CDH	4\24
Drawn	PEM	4\24	In Charge of	TRC	4\24

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

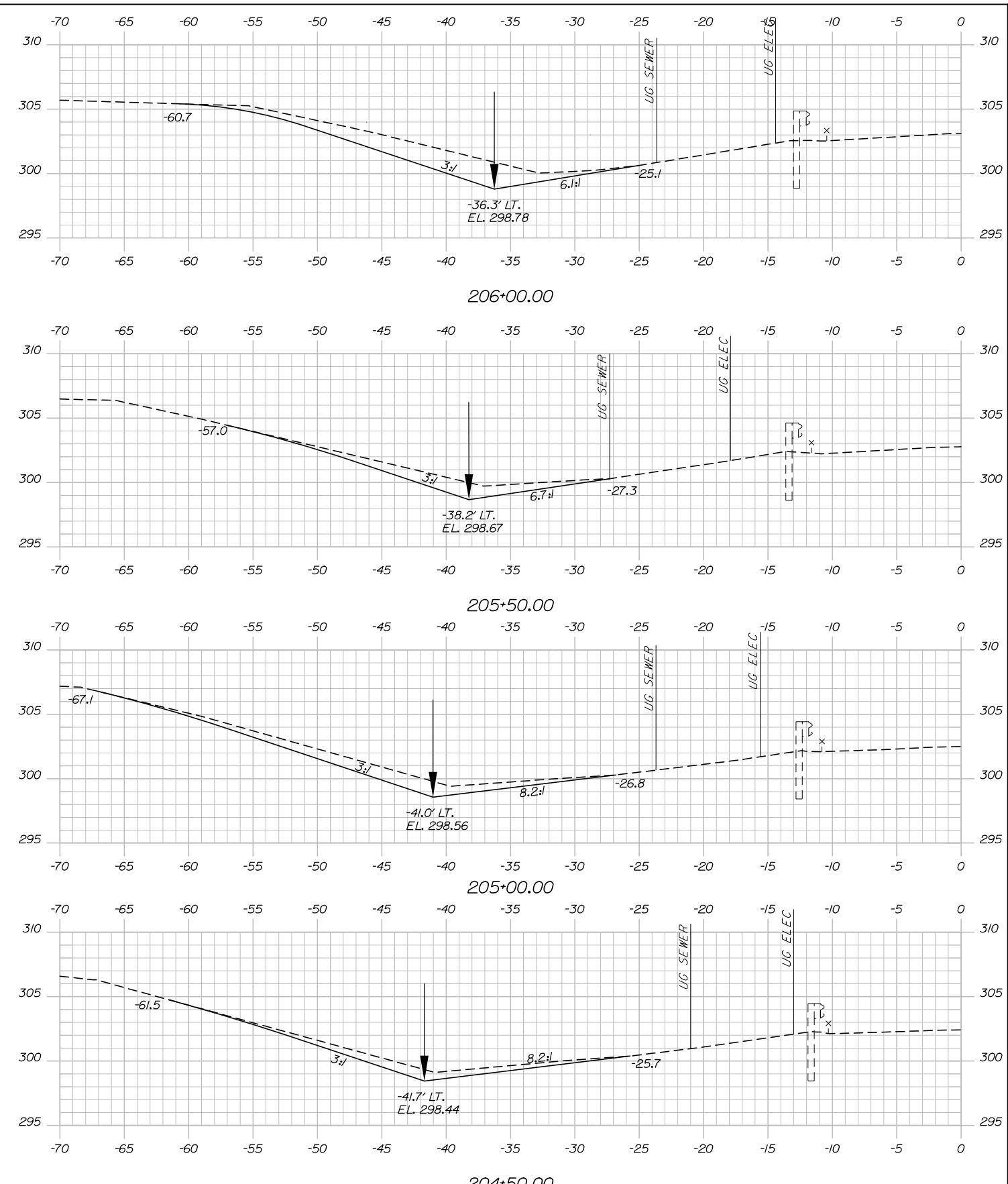
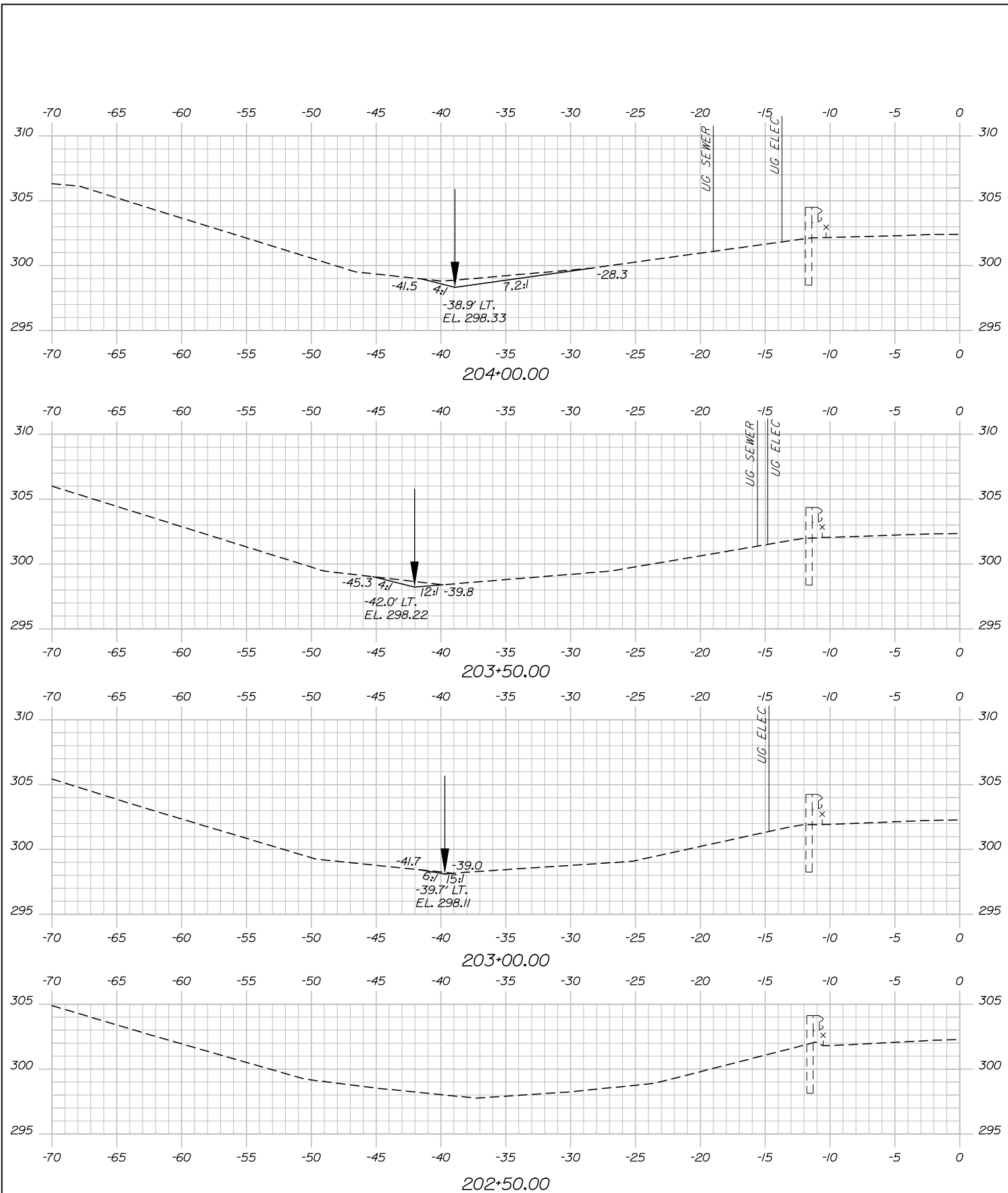
CONTRACT:2024.11

SHEET NUMBER: SP-03

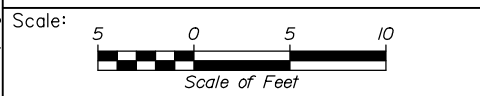
15 OF 48

Date: 4/10/2024

Filename: 015\_LOD\_Plan.dgn



Filename: Xsect\_OnRamp.dgn



Designed by:

**HNTB**

No.	Revision	By	Date

	By	Date		By	Date
Designed	PEM	4\24	Checked	CDH	4\24
Drawn	PEM	4\24	In Charge of	TRC	4\24

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CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

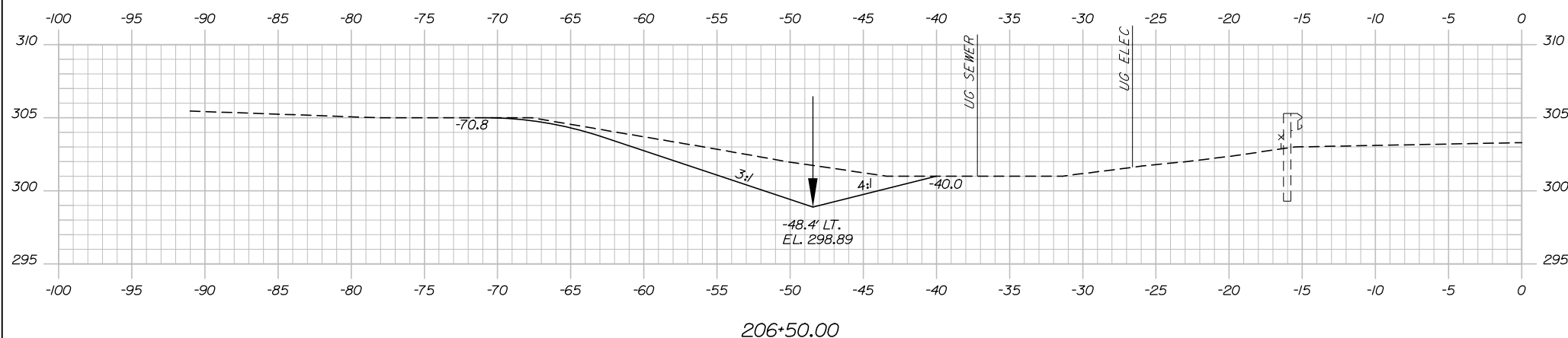
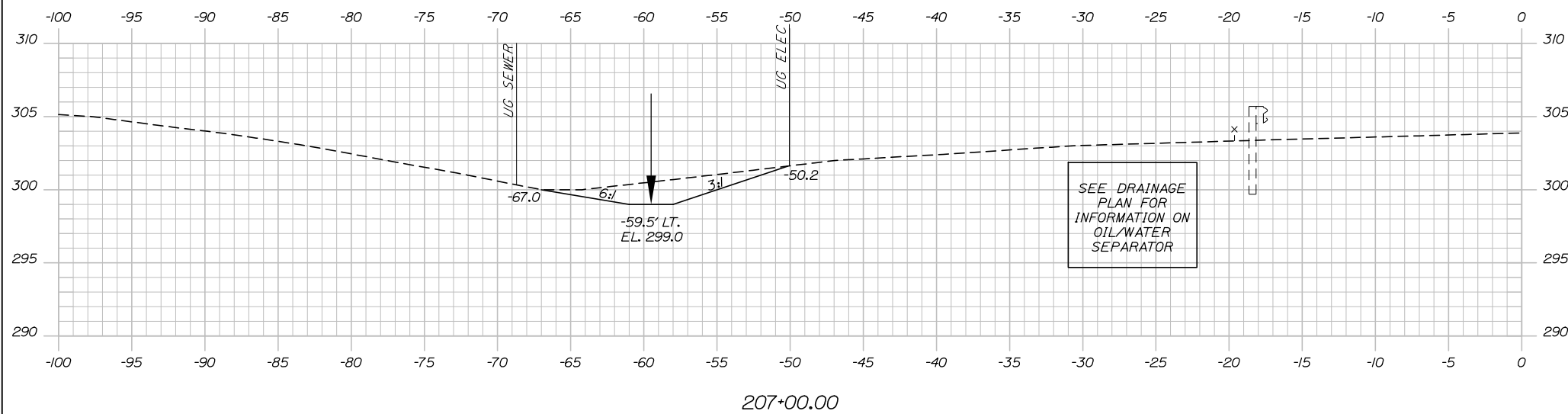
MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 SB ON RAMP CROSS SECTIONS  
 STA. 202+50 TO STA.206+00

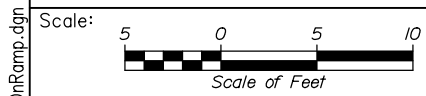
SHEET NUMBER: XS-01  
 16 OF 48

CONTRACT:2024.11





SEE DRAINAGE  
PLAN FOR  
INFORMATION ON  
OIL/WATER  
SEPARATOR



Designed by:

**HNTB**

No.	Revision	By	Date

	By	Date		By	Date
Designed	PEM	4\24	Checked	CDH	4\24
Drawn	PEM	4\24	In Charge of	TRC	4\24

HNTB CORPORATION  
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CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

**THE GOLD STAR  
MEMORIAL HIGHWAY**

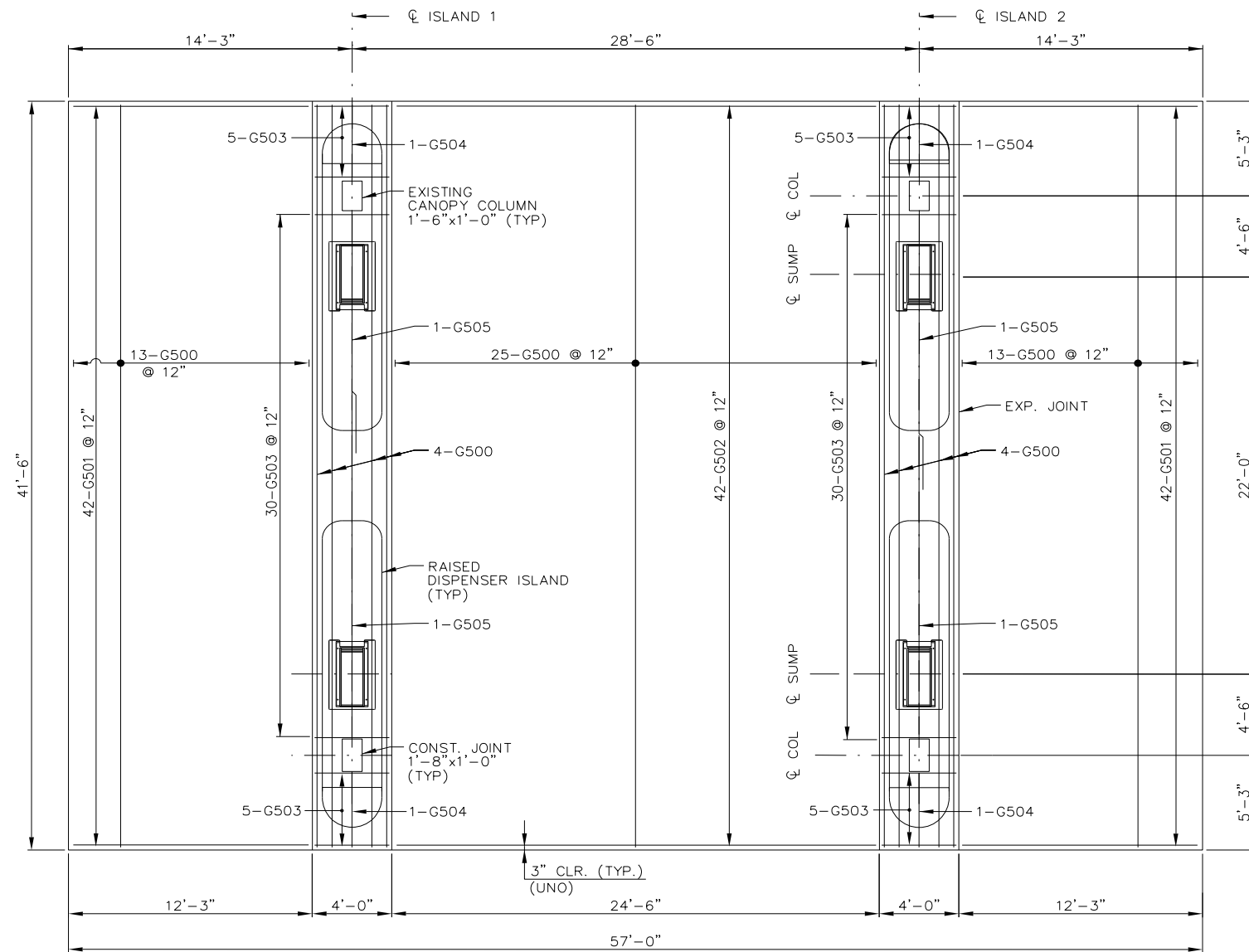
MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
SB ON RAMP CROSS SECTIONS  
STA. 206+50 TO STA.207+00

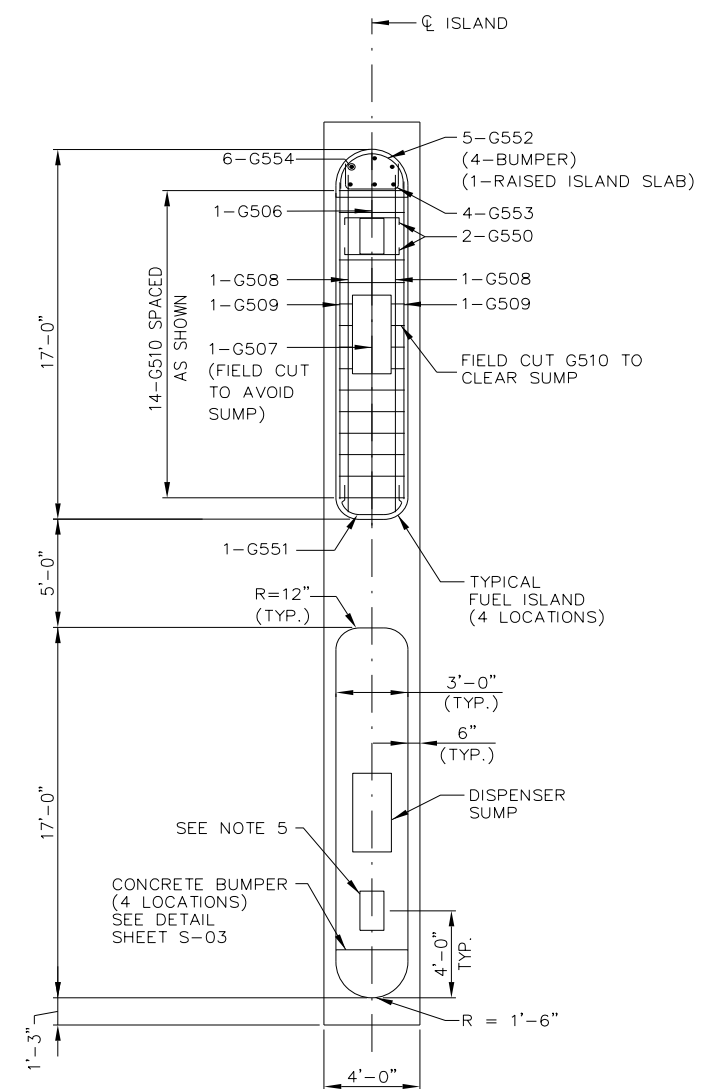
SHEET NUMBER: XS-02  
CONTRACT:2024.11  
17 OF 48

Filename: Xsect\_OnRamp.dgn

Date: 4/10/2024



PLAN  
GASOLINE PLAZA  
1/8" = 1'-0" (11"x17")



PLAN  
TYPICAL RAISED ISLAND  
GASOLINE PLAZA  
1/8" = 1'-0" (11"x17")

NOTES

- CONTRACTOR SHALL VERIFY CANOPY COLUMN SPACING PRIOR TO SUBMITTING REBAR SHOP DRAWINGS FOR APPROVAL.
- ALL CONCRETE SHALL BE CLASS AAA.
- CONCRETE SLABS AT THE DISPENSING ISLANDS TO HAVE A BRUSH FINISH.
- ALL REINFORCING STEEL TO BE EPOXY COATED.
- EXISTING COLUMNS SHALL NOT CONFLICT WITH SLAB OR ISLAND. IF A CONFLICT EXISTS CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING REBAR.
- EXPOSED CONCRETE TO BE TREATED WITH A CLEAR PROTECTIVE COATING.
- MIN. CLEAR COVER SHALL BE 3" U.N.O.
- FOR SECTION VIEW OF DISPENSER ISLAND SEE SHEET S-03.
- EXISTING CANOPY COLUMNS TO BE EXPOSED DURING CONSTRUCTION TO ASSESS CONDITION. THIS WORK SHALL BE COORDINATED WITH HNTB/GPI.
- FIELD CUT G503 TO AVOID SUMP.

Scale: AS NOTED

Designed by:



HNTB CORPORATION  
82 Running Hill Road, Suite 201  
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TEL (207) 774-5155  
FAX (207) 228-0909



THE GOLD STAR  
MEMORIAL HIGHWAY

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
CONCRETE SLAB AND ISLANDS  
AT GASOLINE DISPENSERS

No.	Revision	By	Date

	By	Date		By	Date
Designed	JDW	03/24	Checked	DG	03/24
Drawn	KLB	03/24	In Charge of	TRC	03/24

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CONTRACT: 2024.11

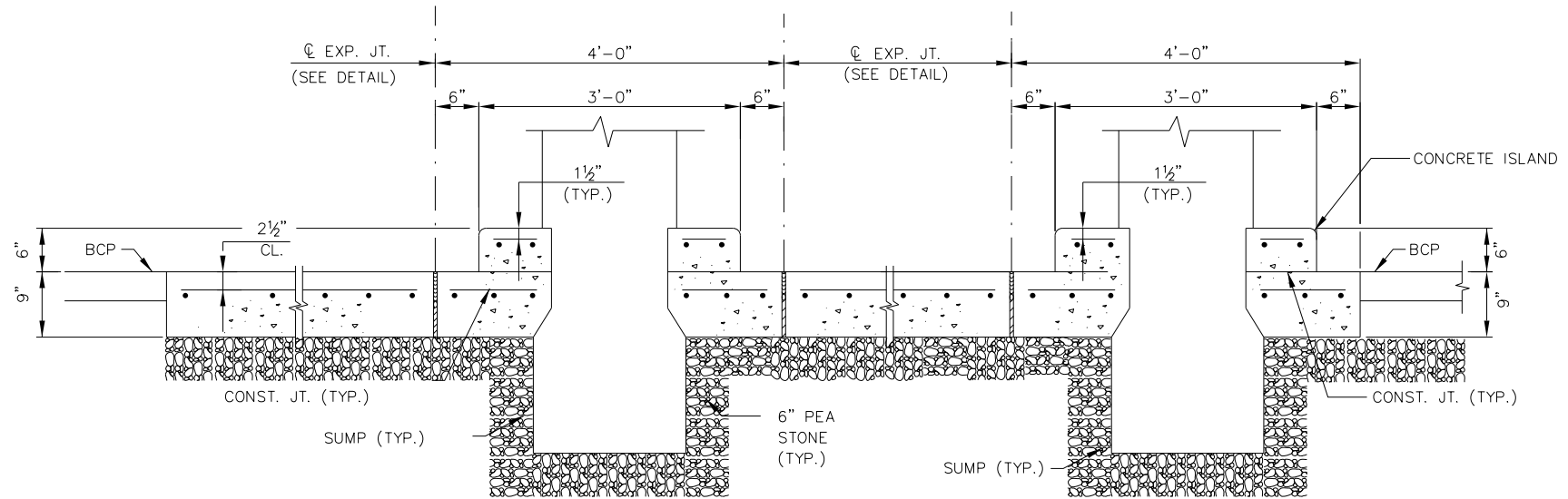
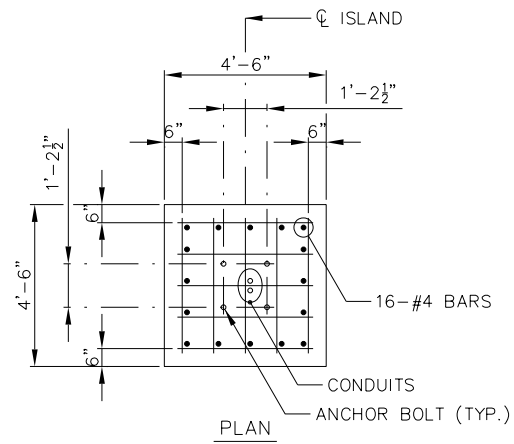
SHEET NUMBER: S-01

18 OF 48

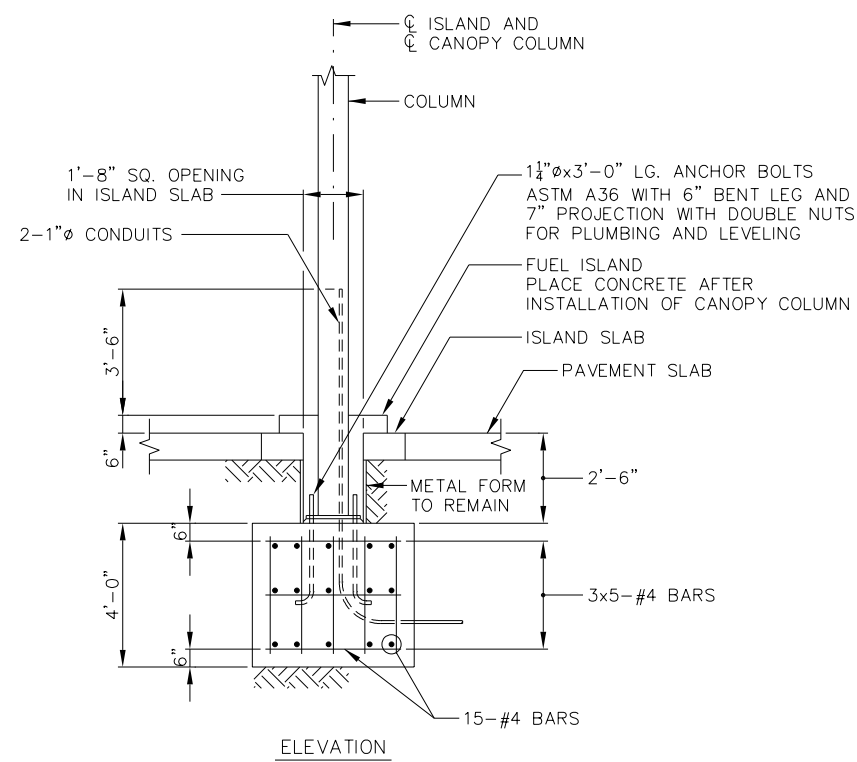
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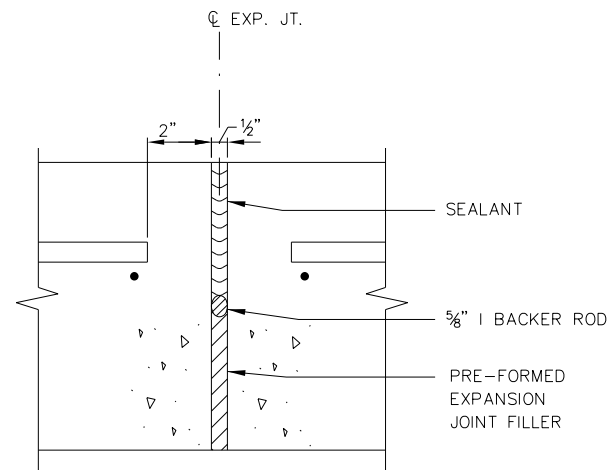
Date: 4/10/2024



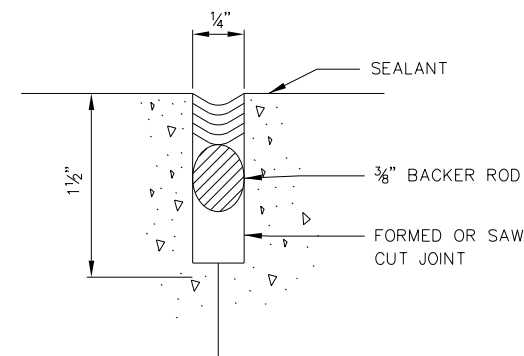
GAS AND DIESEL DISPENSER ISLAND SECTIONS  
1/2" = 1'-0" (11"X17")



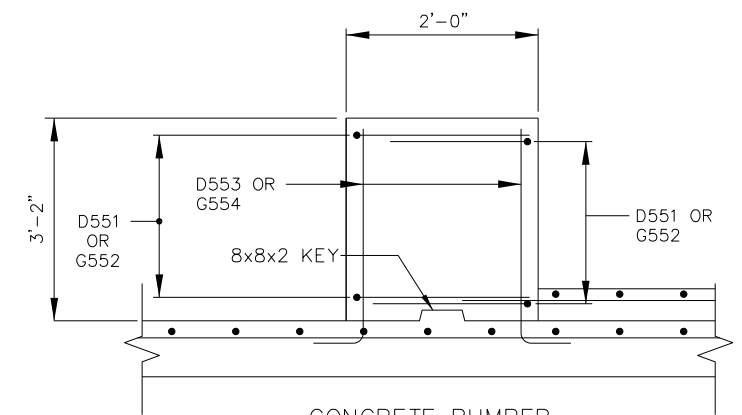
CANOPY COLUMN FOUNDATION  
DIESEL PLAZA 4 LOCATIONS  
3/16" = 1'-0" (11"X17")



EXPANSION JOINT DETAIL  
2" = 1'-0" (11"X17")



CONSTRUCTION JOINT DETAIL  
N.T.S.



CONCRETE BUMPER  
DIESEL PLAZA - 4 LOCATIONS  
GASOLINE PLAZA - 4 LOCATIONS  
1/2" = 1'-0" (11"X17")

NOTES

- FOR NOTES SEE SHEET S-01.
- CANOPY COLUMN FOUNDATION IS SHOWN FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE DESIGNED BY THE CANOPY SUPPLIER.
- SEALANT SHALL BE PER MDOT SECTION 502 EXCEPT IT SHALL BE FUEL RESISTANT TWO PART POLYURETHANE OR POLYSULFIDE.

Scale:		AS NOTED	
No.	Revision	By	Date

Designed by:			
<b>HNTB</b>			
By	Date	By	Date
Designed	JDW 03/24	Checked	DG 03/24
Drawn	KLB 03/24	In Charge of	TRC 03/24

HNTB CORPORATION  
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CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

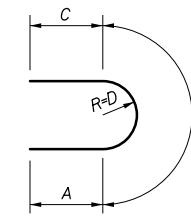
CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
DISPENSER SLAB DETAILS

SHEET NUMBER: S-03  
CONTRACT: 2024.11  
20 OF 48

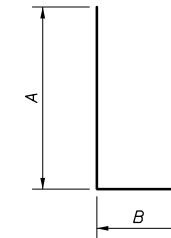
Filename: z\_Gas-Island.dgn

# CUMBERLAND SERVICE PLAZAS FUEL SYSTEM REPLACEMENT

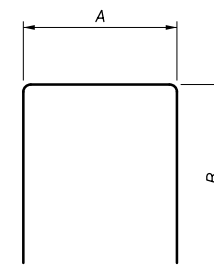
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	INCR.	REMARKS
<b>GASOLINE DISPENSER SLAB</b>													
G500	5	59	41'-0"	Str									
G501	5	84	11'-9"	Str									
G502	5	42	24'-0"	Str									
G503	5	80	3'-6"	Str									
G504	5	4	3'-11"	Str									
G505	5	4	16'-0"	Str									
G506	5	4	2'-9"	Str									
G507	5	4	11'-7"	Str									
G508	5	8	15'-6"	Str									
G509	5	8	14'-3"	Str									
G510	5	56	2'-6"	Str									
G550	5	8	4'-6"	129	2'-6"	1'-0"	1'-0"						
G551	5	4	9'-4"	140	1'-0"	1'-2"	1'-0"	0'-9"					
G552	5	20	4'-5"	117	0'-3"	3'-11"	0'-3"	1'-3"					
G553	5	16	3'-10"	129	2'-6"	0'-8"	0'-8"						
G554	5	24	4'-1"	118	3'-3"	0'-10"							
<b>DIESEL DISPENSER SLAB</b>													
D500	5	51	21'-6"	Str									
D501	5	46	13'-0"	Str									
D502	5	23	13'-6"	Str									
D503	5	46	3'-6"	Str									
D504	5	4	2'-8"	Str									
D505	5	2	12'-8"	Str									
D506	5	4	2'-6"	Str									
D507	5	2	12'-8"	Str									
D508	5	4	18'-0"	Str									
D509	5	4	17'-0"	Str									
D510	5	28	2'-6"	Str									
D550	5	8	4'-6"	129	2'-6"	1'-0"	1'-0"						
D551	5	20	4'-5"	117	0'-3"	3'-11"	0'-3"	1'-3"					
D552	5	16	3'-10"	129	2'-6"	0'-8"	0'-8"						
D553	5	24	4'-1"	118	3'-3"	0'-10"							



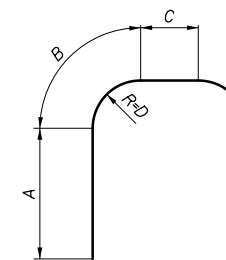
TYPE 117



TYPE 118



TYPE 129



TYPE 140

Date: 4/10/2024

Filename: z\_Reinforce-Schedule.dgn

Scale: <b>NONE</b>			
No.	Revision	By	Date

Designed by:			
<b>HNTB</b>			
By	Date	By	Date
Designed	JDW 03/24	Checked	DG 03/24
Drawn	KLB 03/24	In Charge of	TRC 03/24

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 REINFORCING SCHEDULE

SHEET NUMBER: S-04  
 CONTRACT: 2024.11  
 21 OF 48

**FUEL SYSTEM GENERAL NOTES:**

- THIS IS AN EXISTING UST FACILITY. THE INTENT OF THIS PLAN IS TO SHOW REPLACEMENT OF THE EXISTING UST SYSTEM. THE EXISTING TANKS, PIPING AND DISPENSER AREAS WILL BE REMOVED. TWO NEW UNDERGROUND FUEL STORAGE TANKS, PRODUCT PIPING, VENT PIPING, AND DISPENSER ISLANDS WILL BE INSTALLED. NEW DIESEL OVERHEAD CANOPY WILL BE INSTALLED. EXISTING RETAIL FUEL CANOPY TO REMAIN.
- 100 YEAR FLOOD PLAIN INFORMATION: SITE LOCATION IS NOT LOCATED IN AREAS OF MINIMAL FLOODING PER FLOOD PLAIN INSURANCE RATE MAP 230162 0010B EFF. 5/19/1981.
- SITE IS LOCATED WITHIN AN AQUIFER 24K PER MAINE GEOLOGICAL SURVEY MAP.
- SEASONAL HIGH WATER ELEVATION: UNKNOWN (WATER DEPTH ASSUMED TO BE AT GRADE FOR BUOYANCY CALCULATIONS).
- NEW UNDERGROUND STORAGE TANKS SHALL BEAR A STENCIL, LABEL OR PLATE WHICH CONTAINS THE STANDARD OF DESIGN BY WHICH THE TANK WAS MANUFACTURED, THE YEAR IN WHICH THE TANK WAS MANUFACTURED, THE DIMENSIONS AND CAPACITY OF THE TANK, AND THE NAME OF THE MANUFACTURER. A CERTIFICATE WHICH SHOWS ALL OF THE INFORMATION REQUIRED ABOVE AND WHICH SHOWS THE DATE OF INSTALLATION AND THE REGULATED SUBSTANCES AND PERCENTAGES BY VOLUME OF ANY ADDITIVES WHICH MAY BE STORED PERMANENTLY AND COMPATIBLY WITHIN, SHALL BE CONSPICUOUSLY DISPLAYED AND PERMANENTLY AFFIXED AT THE FACILITY PREMISES.
- WRITTEN DIMENSIONS ON THESE PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.
- CONTRACTOR PERFORMING WORK ON THE FUEL SYSTEM AND COMPONENTS SHALL BE LICENSED BY THE STATE OF MAINE PER 06-096 CHAPTER 691 AND CERTIFIED BY THE MANUFACTURER OF THE EQUIPMENT BEING INSTALLED.
- ALL CONSTRUCTION AND EQUIPMENT MUST CONFORM TO THE APPLICABLE REGULATIONS AND CODES OF THE TOWN, THE STATE OF MAINE DEP (CHAPTER 691), AND THE NFPA.
- ALL ELECTRICAL AND CONDUIT INSTALLATIONS/MATERIALS/OFFSETS SHALL MEET NFPA 70 ARTICLE 514 REQUIREMENTS.
- DISPENSERS WILL BE PROVIDED BY C.N. BROWN. THE CONTRACTOR SHALL COORDINATE WITH C.N. BROWN TO ENSURE COMPATIBILITY BETWEEN INSTALLED MATERIALS/EQUIPMENT AND THE DISPENSERS PROVIDED FOR BOTH THE TEMPORARY AND PERMANENT FUELING SYSTEMS. THE FUEL SYSTEM DESIGN IS BASED ON WAYNE DISPENSERS AS SPECIFIED ON PLANS.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE OTHER CONTRACTORS ON SITE SO AS TO CAUSE THE LEAST INTERRUPTION TO THEIR RESPECTIVE PROJECTS.
- THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE "811" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION. DO NOT EXCAVATE CLOSER THEN 2 FEET TO ANY EXISTING UTILITY USING HEAVY EQUIPMENT UNTIL IT'S EXACT LOCATION HAS BEEN VERIFIED BY HAND EXCAVATION.
- CONTRACTOR SHALL PROVIDE SHORING OR OTHER MEANS AS NECESSARY TO ENSURE THE SAFETY OF PERSONNEL IN EXCAVATIONS AND TO LIMIT DISTURBANCE OF EXISTING STRUCTURES. SEE UST SHORING NOTES.
- THE TANK MANUFACTURER REQUIRES THE USE OF FILTER FABRIC FOR INSTALLATIONS SUBJECT TO TIDAL CONDITIONS, FREQUENTLY CHANGING GROUNDWATER LEVELS, UNSTABLE SOILS (MUCK OR LANDFILL), OR WATER CONDITIONS WITH SILTY SOIL. IT IS RECOMMENDED THAT FILTER FABRIC BE REQUIRED FOR THIS PROJECT BASED UPON OUR OBSERVATION OF EXISTING CONDITIONS.
- THE PRIMARY OVERFILL PREVENTION DEVICE FOR THIS SITE SHALL CONSIST OF AN OVERFILL ALARM WHICH ALERTS THE TRANSFER OPERATOR BY TRIGGERING AN AUDIBLE AND VISUAL ALARM WHEN THE TANK IS NO MORE THAN 90% FULL. A SECONDARY OVERFILL PROTECTION VALVE WILL BE PROVIDED THAT WILL SHUT OFF FLOW INTO THE TANK WHEN THE TANK IS NO MORE THAN 95% FULL.
- NEW FUEL PIPING SHALL BE FITTED WITH PRESSURE TEST BOOT FITTINGS AT EACH SUMP/CONTAINMENT PENETRATION. AT THE COMPLETION OF THE WORK, TEST FITTINGS SHALL BE DISENGAGED FROM THE SECONDARY PIPING INTERSTICE, AND LEFT IN PLACE.
- CONTRACTOR TO PROVIDE FLEXIBILITY ON ALL VENT LINES BY PROVIDING AT LEAST FOUR FEET OF STRAIGHT RUN FOR FRP PIPE, BETWEEN CHANGES IN DIRECTION GREATER THAN 30 DEGREES.
- TANK FILL AND VAPOR RECOVERY COVERS SHALL BE COLOR CODED PER API 1637 (DIESEL-YELLOW, REGULAR GASOLINE-WHITE, PREMIUM GRADE-RED, VAPOR RECOVERY-ORANGE).
- OUTDOOR FIRE EXTINGUISHERS (80:BC) ARE TO BE LOCATED WITHIN 100' OF DISPENSING AREA PER NFPA (30A-18, 9.2.5.2).
- CONDITIONS AT THE MTA SERVICE PLAZA WILL EXPOSE THE FUELING SYSTEM TO EXTREME TEMPERATURES, PRECIPITATION AND CONCENTRATED HIGHWAY DEICING CHEMICALS. PRODUCTS INCORPORATED IN THE WORK SHALL BE OF HIGH QUALITY DESIGNED AND CONSTRUCTED FOR THE ENVIRONMENTAL CONDITIONS EXPOSED.
- CONTRACTOR SHALL REVIEW GEOTECHNICAL REPORT FOR EXISTING SUBSURFACE CONDITIONS. ANY UNSTABLE MATERIALS SHALL BE REMOVED AS REQUIRED IN ACCORDANCE WITH TANK MANUFACTURERS INSTALLATION MANUAL.
- IN THE EVENT THAT LEDGE IS ENCOUNTERED, IT SHALL BE REMOVED BY DRILLING AND HOE RAM IN ACCORDANCE WITH MDOT 105.2.6 AND SECTION 203. LEDGE SHALL BE REMOVED TO A DEPTH OF AT LEAST ONE FOOT BELOW THE TANK BOTTOM ELEVATION. REMOVAL SHALL EXTEND A SUFFICIENT DISTANCE OUTSIDE THE TANK FOOT PRINT TO PERMIT A MINIMUM DISTANCE OF TWO FEET CLEAR DISTANCE BETWEEN THE TANK SHELL AND LEDGE. IF ENCOUNTERED PAYMENT WILL BE MADE UNDER ITEM 800.02.
- ALL UNDERGROUND UTILITIES (FUEL PIPING AND ELECTRICAL CONDUIT) INSTALLED SHALL BE RECORDED ON AS-BUILT DRAWINGS. AS-BUILTS SHALL IDENTIFY THE UTILITY, IT'S DEPTH, AND ALIGNMENT AT EACH CHANGE OF DIRECTION OR DEPTH. UTILITY LOCATIONS SHALL BE ACCURATE TO WITHIN +/- 2" OF THE UTILITY CENTERLINE. A PAPER COPY OF THE AS-BUILT RECORD DRAWINGS SHALL BE PROVIDED TO MTA AT THE COMPLETION OF THE WORK.
- UST INSTALLER SHALL COMPLETE AND SUBMIT THE NOTICE OF INTENT TO REMOVE AN UNDERGROUND OIL STORAGE TANK FACILITY OR UNDERGROUND PIPING TO THE MAINE DEP AT LEAST 10 DAYS PRIOR TO THE COMMENCEMENT OR REMOVAL WORK.
- THE UST INSTALLER SHALL COMPLETE AND SUBMIT THE CERTIFICATION OF PROPER INSTALLATION TO THE MAINE DEP WITHIN (30) DAYS OF COMPLETION OF PROJECT.

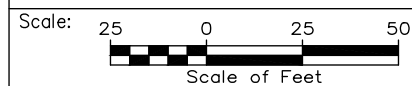
**UST SHORING NOTES**

- SUBMIT TO THE ENGINEER FOR APPROVAL COMPLETE WORKING DRAWINGS SHOWING THE METHOD OF TANK EXCAVATION SUPPORT, AND DEWATERING TECHNIQUES THAT ARE PROPOSED TO BE USED. THE FOLLOWING IS NOT INTENDED TO LIMIT, BUT TO PROVIDE, THE MINIMUM DETAILS THAT MUST BE INCLUDED IN THE SUBMITTAL.
- STRUCTURAL ANALYSES DETAILING THE DESIGN OF SHORING AND BRACING. SUBMITTAL DATA SHALL BE COMPLETE WITH CALCULATIONS AND DRAWINGS INDICATING ALL STRUCTURAL MEMBERS TO BE UTILIZED.
- WORKING DRAWINGS AND DESIGN DATA DESCRIBING THE PROPOSED DEWATERING SYSTEM INCLUDING, BUT NOT LIMITED TO, THE ARRANGEMENT, LOCATIONS AND DEPTHS OF DEWATERING SYSTEM COMPONENTS, STANDBY EQUIPMENT AND STANDBY POWER SUPPLY, AND THE SIZE AND TYPE OF DEWATERING SYSTEM. THE CONTRACTOR SHALL EVALUATE WHETHER DEWATERING WILL CAUSE SETTLEMENT OF THE SOIL OUTSIDE THE EXCAVATION, AND SHALL DESIGN THE DEWATERING SYSTEM TO MINIMIZE SUCH SETTLEMENTS.
- EXCAVATION SUPPORT DESIGN SUBMITTALS AND GROUND WATER CONTROL SUBMITTALS SHALL BE PREPARED BY A PROFESSIONAL ENGINEER REGISTERED LICENSED IN THE STATE OF MAINE.
- THE ENGINEER WILL REVIEW SUBMITTALS WITH CONSIDERATION OF REQUIREMENTS OF THE COMPLETED WORK, UTILITIES, AND THE POSSIBILITY OF UNNECESSARY DELAYS IN THE EXECUTION OF THE WORK TO BE CONSTRUCTED UNDER THIS CONTRACT. REVIEW OF THE CONTRACTOR SUBMITTALS BY THE ENGINEER SHALL NOT BE CONSTRUED IN ANY WAY AS RELIEVING THE CONTRACTOR OF HIS RESPONSIBILITY FOR THE SAFETY OF THIS METHOD OR EQUIPMENT USED, OR FOR HIS RESPONSIBILITY TO SATISFACTORILY COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
- EXCAVATION SLOPING AND SUPPORT IMPLEMENTATION MUST MEET OSHA EXCAVATION SAFETY REQUIREMENTS AND A STAMPED EARTH SUPPORT DESIGN PROVIDED IF SHEETING IS TO BE IMPLEMENTED.
- THE CONTRACTOR SHALL INSTALL SHEETING AND/OR SHORING, OR OTHERWISE PROTECT OPEN EXCAVATIONS, IN ACCORDANCE WITH OSHA REQUIREMENT TO ALLOW INSTALLATION OF THE UST AND TO PROTECT THE WORKERS FROM SLIDING OR CAVE-INS. ALL SURFACE WATER SHALL BE DIVERTED TO PREVENT DIRECT ENTRY INTO THE EXCAVATION.
- PAYMENT FOR UST SHORING WILL BE PAID UNDER PAY ITEM 524.30

**FUEL SYSTEM TESTING NOTES:**

- THE UNDERGROUND STORAGE SYSTEM WILL BE TESTED BY THE CONTRACTOR PRIOR TO BACKFILLING. THE FOLLOWING TESTS SHALL BE CERTIFIED BY THE INSTALLER PRIOR TO BACKFILLING AND COPIES OF THE RESULT SHALL BE PROVIDED TO THE OWNER AND PROFESSIONAL ENGINEER AT THE TIME OF BACKFILL INSPECTION.:
  - TANKS (CSI):**  
TANK INSTALLER MUST BE CERTIFIED BY TANK MANUFACTURER. EACH NEW TANK SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH CONTAINMENT SOLUTIONS INSTALLATION MANUAL AND STATE REGULATIONS. TANK MANUFACTURER'S CHECKLIST MUST BE COMPLETED (INCLUDING ALL TANK DEFLECTION MEASUREMENTS) BY CONTRACTOR.
  - PRODUCT PIPING (APT)**  
PIPING SHALL BE TESTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, STATE REQUIREMENTS, AND A AT A MINIMUM THE FOLLOWING:  
**PRIMARY LINE:**  
APPLY AN AIR SOURCE TO THE XP PIPING. PRESSURIZE THE LINE TO BETWEEN 50 AND 100 PSI (3.5 AND 6.89 BAR) AND ALLOW THE PRESSURE TO SETTLE. AFTER PIPING IS PRESSURIZED, SOAP ALL JOINTS AND FITTINGS. IF A LEAK IN THE TERMINATION FITTING IS DISCOVERED RELIEVE THE AIR PRESSURE, RETIGHTEN AND REPRESSURIZE. THE DURATION OF THE TEST MAY VARY, CHECK WITH THE LOCAL AUTHORITY OR INSPECTOR TO VERIFY REQUIREMENTS. IF NO LOCAL REQUIREMENTS ARE SPECIFIED, APT RECOMMENDS A MINIMUM OF A 1-HOUR PRESSURE TEST SHOULD BE OBSERVED WITH NO PRESSURE LOSS. UPON COMPLETION OF A PASSING PRESSURE TEST, PRESSURE CAN BE RELIEVED OR PRESSURE MAY BE HELD UNTIL BACKFILL AND CONCRETE IS POURED.  
**NOTE:** IF PRESSURE IS LEFT ON THE PIPING SYSTEM FOR AN EXTENDED PERIOD OF TIME, THERMAL EXPANSION OR CONTRACTION MAY CAUSE THE PIPING PRESSURE TO FLUCTUATE.  
**INTERSTITIAL SPACE:**  
IT IS CRITICAL TO VERIFY THAT THE SCUFF GUARD HAS BEEN PROPERLY CUT BACK TO BE EVEN WITH OR OUTSIDE OF THE CONTAINMENT SUMP TO ENSURE THAT THE APT DUCTED ENTRY BOOT AS WELL AS THE TEST BOOT SEALS TO THE SC JACKET AND NOT ON THE SCUFF GUARD FOR THIS PRESSURE TEST. IF THE TEST BOOT IS NOT SEALED DIRECTLY ONTO THE SC JACKET, YOU COULD GET FALSE READINGS. ONCE THE TEST BOOTS ARE IN PLACE, PRESSURIZE THE PIPING TO BETWEEN 5 AND 8 PSI (0.34 AND 0.55 BAR). AFTER THE PRESSURE HAS STABILIZED, DISCONNECT THE AIR SUPPLY AND MONITOR THE SYSTEM FOR LEAKAGE. THE LINE NEEDS TO REMAIN PRESSURIZED FOR A MINIMUM OF ONE HOUR WITH NO PRESSURE LOSS DETECTED IN ORDER FOR THE PIPING TO PASS. THE CONTRACTOR SHALL MAINTAIN THE REQUIRED PRESSURE FOR A MINIMUM OF 2 HOURS AFTER THE BACKFILL PROCESS HAS BEEN COMPLETED.  
**NOTE:** AFTER TESTING THE SECONDARY LINE, OPEN THE TEST VALVES AND PULL BACK THE TEST BOOTS TO ALLOW ANY LEAK FROM THE PRIMARY LINE TO ENTER INTO THE SUMP WHERE IT CAN BE DETECTED.
  - VENT PIPING (NOV DUALOY 3000/L):**  
VISUALLY INSPECT ALL JOINTS FOR PROPER INSERTION AND ADHESIVE CURE PRIOR TO PRESSURIZING THE SYSTEM. A GAP BETWEEN THE ADHESIVE BEAD AND THE FITTING SHOULDER INDICATES THAT THE POSSIBILITY OF JOINT FAILURE EXISTS. MAKE ANY NECESSARY REPAIRS BEFORE PRESSURIZING THE PIPING SYSTEM. CHECK THE INTEGRITY OF THE JOINTS BY PRESSURIZING THE SYSTEM TO 25 PSIG AND HOLDING THE PRESSURE FOR A MINIMUM OF ONE MINUTE. SOAP ALL JOINTS TO TEST FOR LEAKS. IF THERE ARE NO LEAKS, RAISE THE LINE PRESSURE IN THE SYSTEM TO A MAXIMUM OF 50 PSIG. AGAIN, HOLD THE PRESSURE FOR AT LEAST ONE MINUTE AND SOAP ALL JOINTS TO CHECK FOR LEAKS. AFTER THE PIPING HAS PASSED THE 50 PSIG PRESSURE TEST, REDUCE THE PRESSURE TO 25 PSIG AND MAINTAIN UNTIL ALL PAVING HAS BEEN COMPLETED.  
**WARNING:** DO NOT AIR TEST LINES THAT HAVE CONTAINED HAZARDOUS, FLAMMABLE, OR COMBUSTIBLE LIQUIDS OR VAPORS UNLESS THEY ARE PURGED AND MADE SAFE BEFOREHAND. IF PURGING IS NOT FEASIBLE, AN INERT GAS SUCH AS NITROGEN OR HELIUM MAY BE USED TO PRESSURIZE THE PIPING.
- DOUBLE WALL DISPENSER SUMPS (FRANKLIN FUELING) & TANK SUMPS (CSI):**  
THE NEW SUMPS SHALL BE HYDROSTATICALLY TESTED FOR TIGHTNESS IN ACCORDANCE WITH MAINE DEP (CHAPTER 691) AS FOLLOWS:
  - AFTER ALL SEAMS AND FITTINGS HAVE BEEN COMPLETED AND ALL PIPING AND CONDUITS HAVE BEEN INSTALLED;
  - AT A LEVEL THAT IS 3" ABOVE THE HIGHEST PENETRATION.
  - BY RECORDING THE LIQUID LEVEL MEASUREMENTS AT THE BEGINNING AND END OF THE TEST;
  - FOR A MINIMUM OF 3 HOURS; AND
  - WITH NO ADDITION OF LIQUID TO THE SUMP.  
A PASSING HYDROSTATIC TEST SHALL HAVE NO LOSS OF LIQUID OR OBSERVED LEAKS AFTER THE COMPLETE DURATION OF THE TEST.
- INTERSTITIAL TESTING OF DOUBLE WALL CONTAINMENT SUMPS**  
THE INTERSTITIAL SPACE OF DOUBLE WALL CONTAINMENT SUMPS SHALL BE CAREFULLY TESTED PER MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.
- SPILL CONTAINMENT-(EMCO WHEATON):**  
EMCO WHEATON DOUBLE SPILL CONTAINMENT MANHOLES ARE VACUUM TESTED, BOTH PRIMARY AND SECONDARY, PRIOR TO SHIPMENT. TO ENSURE THAT NO DAMAGE HAS INCURRED DURING SHIPMENT OR INSTALLATION, ALL SPILL CONTAINMENT MANHOLES MUST BE TESTED USING THE FOLLOWING METHOD.  
**SECONDARY INTEGRITY TEST (VACUUM):**
  - REMOVE THE GAUGE FROM THE INSPECTION PORT AND INSTALL THE TEST ADAPTER P/N 494343 (INCLUDED WITH THE VACUUM APPARATUS).
  - ATTACH AIR PRESSURE SOURCE TO AIR PRESSURE REGULATOR ON VACUUM APPARATUS.
  - SLOWLY APPLY VACUUM OF 30" WC TO THE INTERSTITIAL SPACE; WAIT 30 SECONDS. REAPPLY 30" WC.
  - ENSURE SWITCH IS IN OFF (CENTER) POSITION, START TIMER AND RECORD REMAINING VACUUM AFTER 1 MINUTE.
  - IF THE REMAINING VACUUM AFTER 1 MINUTE IS 26" WC (1.9" MERCURY) OR GREATER, BOTH THE PRIMARY AND THESECONDARY CONTAINMENT VESSELS ARE TIGHT.
  - IF THE TEST FAILS, REPEAT THE TEST. IF THE TEST FAILS A SECOND TIME, THEN PERFORM PRESSURE TEST PER MANUFACTURER SPECIFICATIONS.
  - REPLACE COMPONENTS OR REPAIR AS NECESSARY.
  - REINSTALL GAUGE (OR PUSH BUTTON TEST PORT ASSEMBLY)

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No.	Revision	By	Date

Designed by:			
By	Date	By	Date
Designed	DJP 4/24	Checked	HS 4/24
Drawn	AK 4/24	In Charge of	FCM 4/24

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
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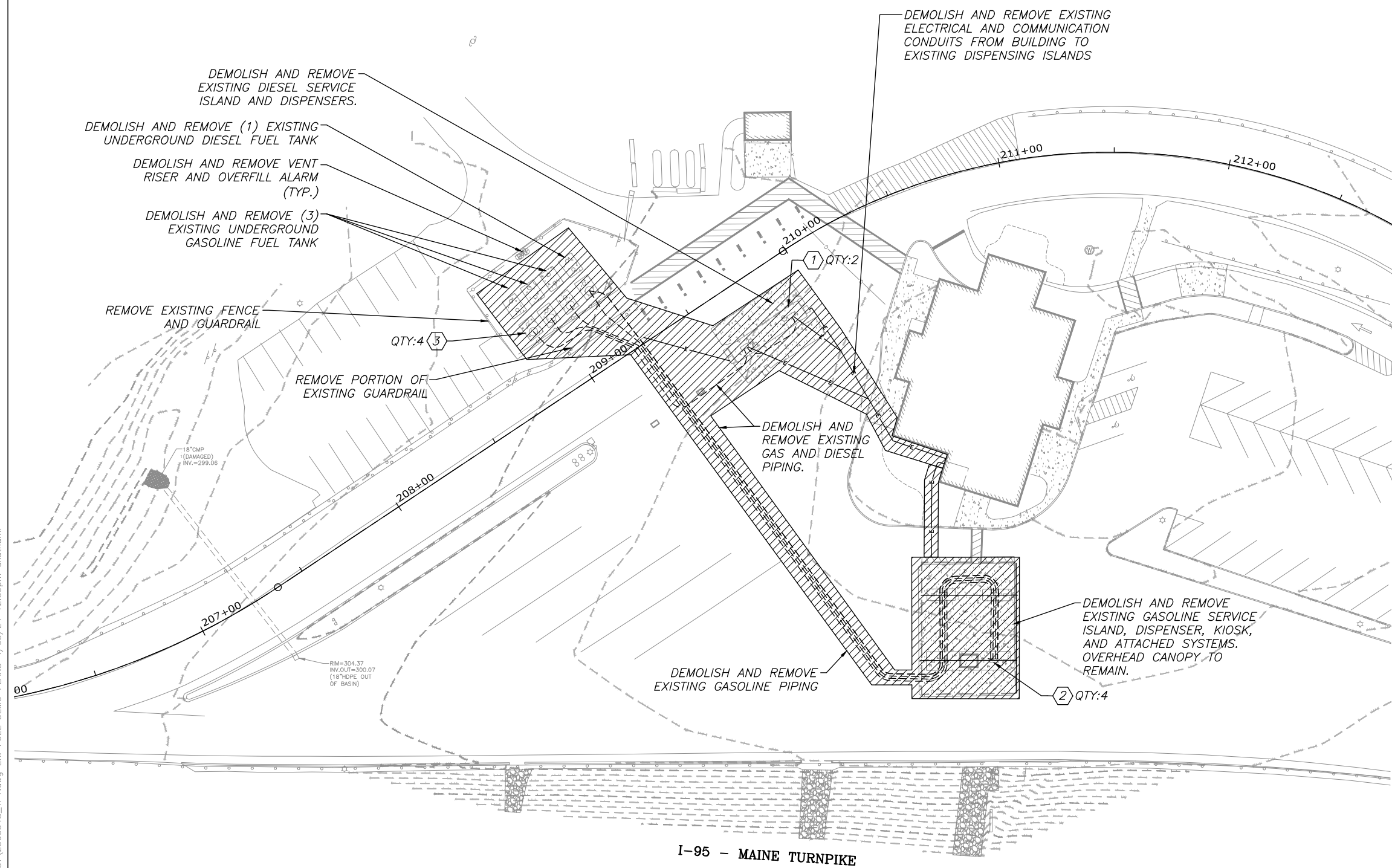
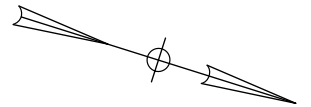
CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

## THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
FUEL SYSTEM NOTES

SHEET NUMBER: FS-1  
CONTRACT: 2024.11  
22 OF 48



**GENERAL NOTES:**

1. DUE TO THE EXISTENCE OF THE FUELING SYSTEM, IT IS ANTICIPATED CONTAMINATED SOILS WILL BE ENCOUNTERED AS PART OF THE PROJECT. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL REFER TO FUEL SYSTEM SPECIFICATION FOR INFORMATION REGARDING CONTAMINATION AND DISPOSAL OF CONTAMINATED SOILS AND GROUNDWATER.
2. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING EQUIPMENT (FUEL PIPES, CONDUIT RUNS, MATERIALS, ETC.) AND EXISTING UTILITIES IN THE WORK AREA OF CONCERN FOR LOCATIONS AND SIZES BEFORE BEGINNING WORK.

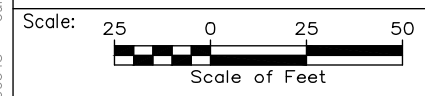
**KEY NOTES:**

- ① DIESEL FUEL DISPENSER SHALL BE REMOVED, COORDINATE WITH ELECTRICAL SHEETS FOR REMOVAL OF CONDUIT AND CONDUCTORS BACK TO SOURCE.
- ② UNLEADED FUEL DISPENSER SHALL BE REMOVED, COORDINATE WITH ELECTRICAL SHEETS FOR REMOVAL OF CONDUIT AND CONDUCTORS BACK TO SOURCE.
- ③ FOUR (4) EXISTING UNDERGROUND STORAGE TANKS SHALL BE REMOVED. COORDINATE WITH ELECTRICAL SHEETS FOR REMOVAL OF CONDUIT AND CONDUCTORS BACK TO SOURCE.

**LEGEND:**

APPROXIMATE LIMITS OF FUEL SYSTEM INFRASTRUCTURE TO BE DEMOLISHED.

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Designed by:

<b>GPI</b> Engineering Design Planning Construction Management 603.893.0720 GPINET.COM	
Greenman-Pedersen, Inc. 44 Stiles Road, Suite One Salem, NH 03079	
By	Date
Designed	DJP 4/24
Checked	HS 4/24
In Charge of	FCM 4/24

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

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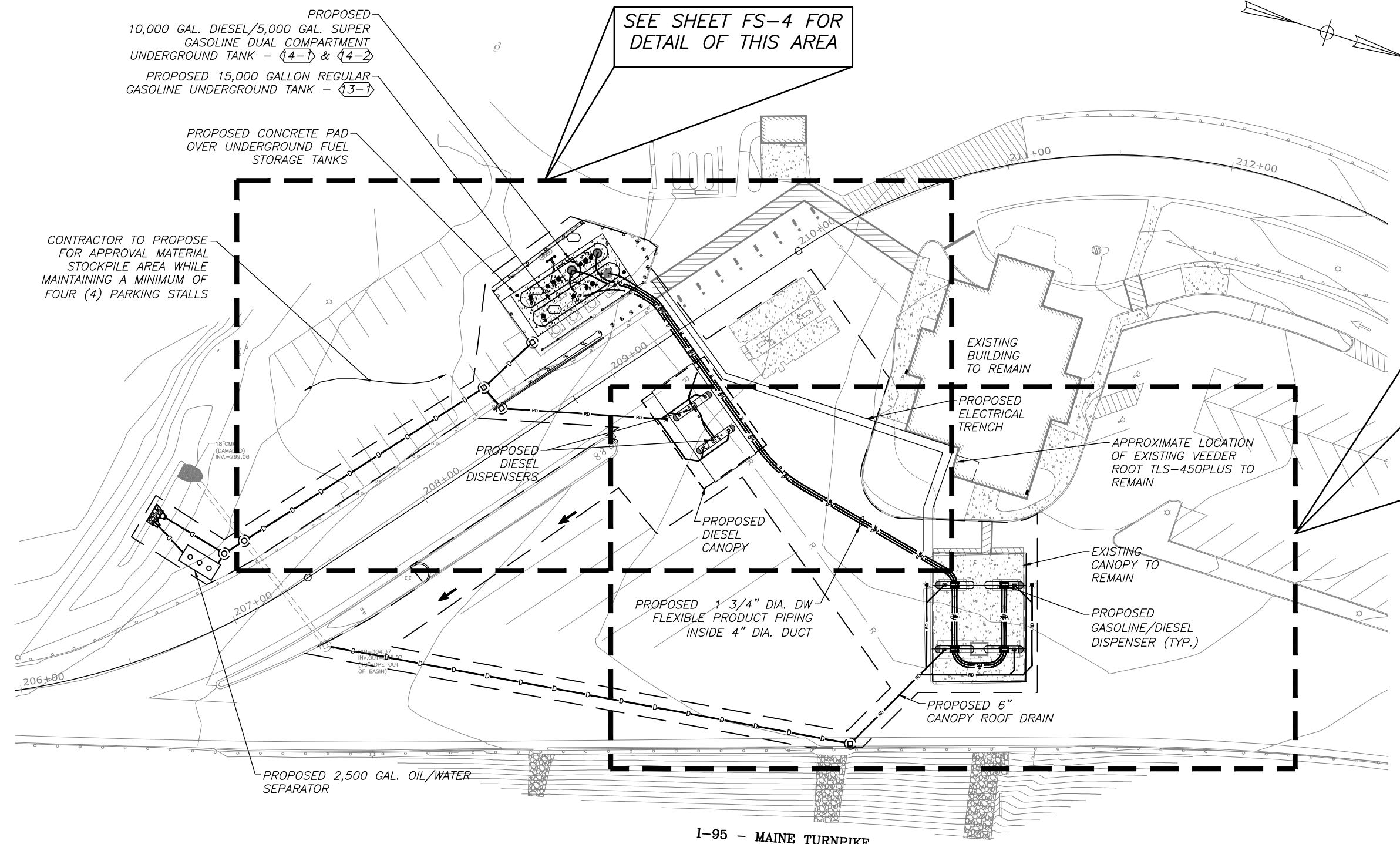
CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8

SITE PLAN - EXISTING FUEL DEMOLITION PLAN

SHEET NUMBER: FS-2  
CONTRACT: 2024.11  
23 OF 48

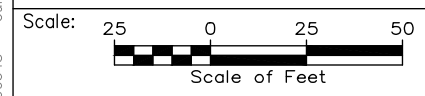
TANK LEGEND:

9-1 10K DIESEL	EXISTING 10,000 GAL DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK INSTALLED 07/01/1990 (TO BE REMOVED)
10-1 10K REGULAR	EXISTING 10,000 GAL DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK INSTALLED 07/01/1990 (TO BE REMOVED)
11-1 10K PLUS	EXISTING 10,000 GAL DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK INSTALLED 07/01/1990 (TO BE REMOVED)
12-1 10K PREMIUM	EXISTING 10,000 GAL DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK INSTALLED 07/01/1990 (TO BE REMOVED)
13-1 15K REGULAR	NEW 15,000 GAL 8'-0" DIA. CSI DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK
14-1 15K DSL/SUP	NEW 15,000 GAL 8'-0" DIA. COMPARTMENTALIZED CSI DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK
○ = MDEP TANK DESIGNATION	



SEE SHEET FS-5 FOR DETAIL OF THIS AREA

F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_IP1.dwg OVERALL FUEL DESIGN PLAN 4/05/24 12:39pm akuthumi



No.	Revision	By	Date

Designed by:

GPI Engineering Design Planning Construction Management 603.893.0720 GPINET.COM Greenman-Pedersen, Inc. 44 Stiles Road, Suite One Salem, NH 03079			
By	Date	By	Date
Designed	DJP 4/24	Checked	HS 4/24
Drawn	AK 4/24	In Charge of	FCM 4/24

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
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 TEL (207) 774-5155  
 FAX (207) 228-0909

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CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 FUEL SYSTEM OVERVIEW PLAN  
 PROPOSED FUEL DESIGN

SHEET NUMBER: FS-3  
 CONTRACT: 2024.11  
 24 OF 48



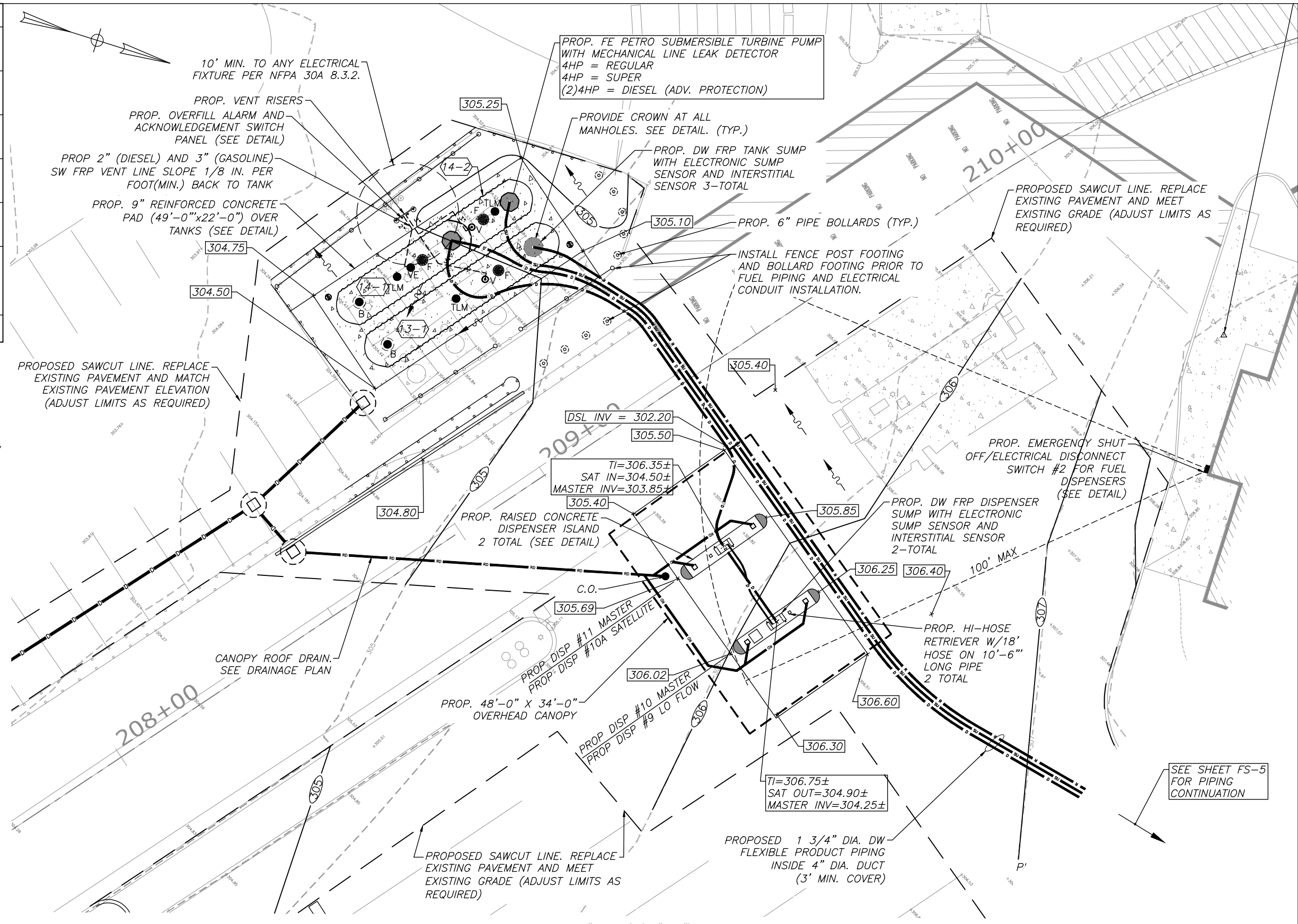
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13-1 15K REGULAR	NEW 15,000 GAL 8'-0" DIA. CSI DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK
14-1 15K DSL/SUP	NEW 15,000 GAL 8'-0" DIA. COMPARTMENTALIZED CSI DOUBLE WALL FIBERGLASS UNDERGROUND STORAGE TANK
	BASE=10K DIESEL (14-1) END=5K SUPER (14-1)

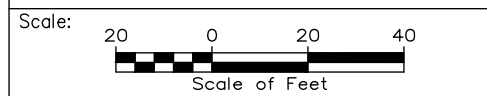
○ = MDEP TANK DESIGNATION

**LEGEND**

305.00	PROP. SPOT ELEVATION AT BOTTOM OF CURB/ISLAND
○ 20	PROP. CONTOUR ELEVATION
→	PROP. DIRECTION OF SURFACE FLOW
- - - 100 - - -	EXISTING CONTOUR ELEVATION
F	FILL RISER WITH 15 GAL. DW SPILL CONTAINMENT MANHOLE
V	STAGE I EVR VAPOR RECOVERY RISER WITH 5 GAL. DW SPILL CONTAINMENT MANHOLE
VE	VENT EXTRACTOR
TLM	TANK LEVEL MONITOR
INT	WET INTERSTITIAL
STP	SUBMERSIBLE TURBINE PUMP
⊕	OBSERVATION WELL



SCALE: 1" = 20' (11"X17")



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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

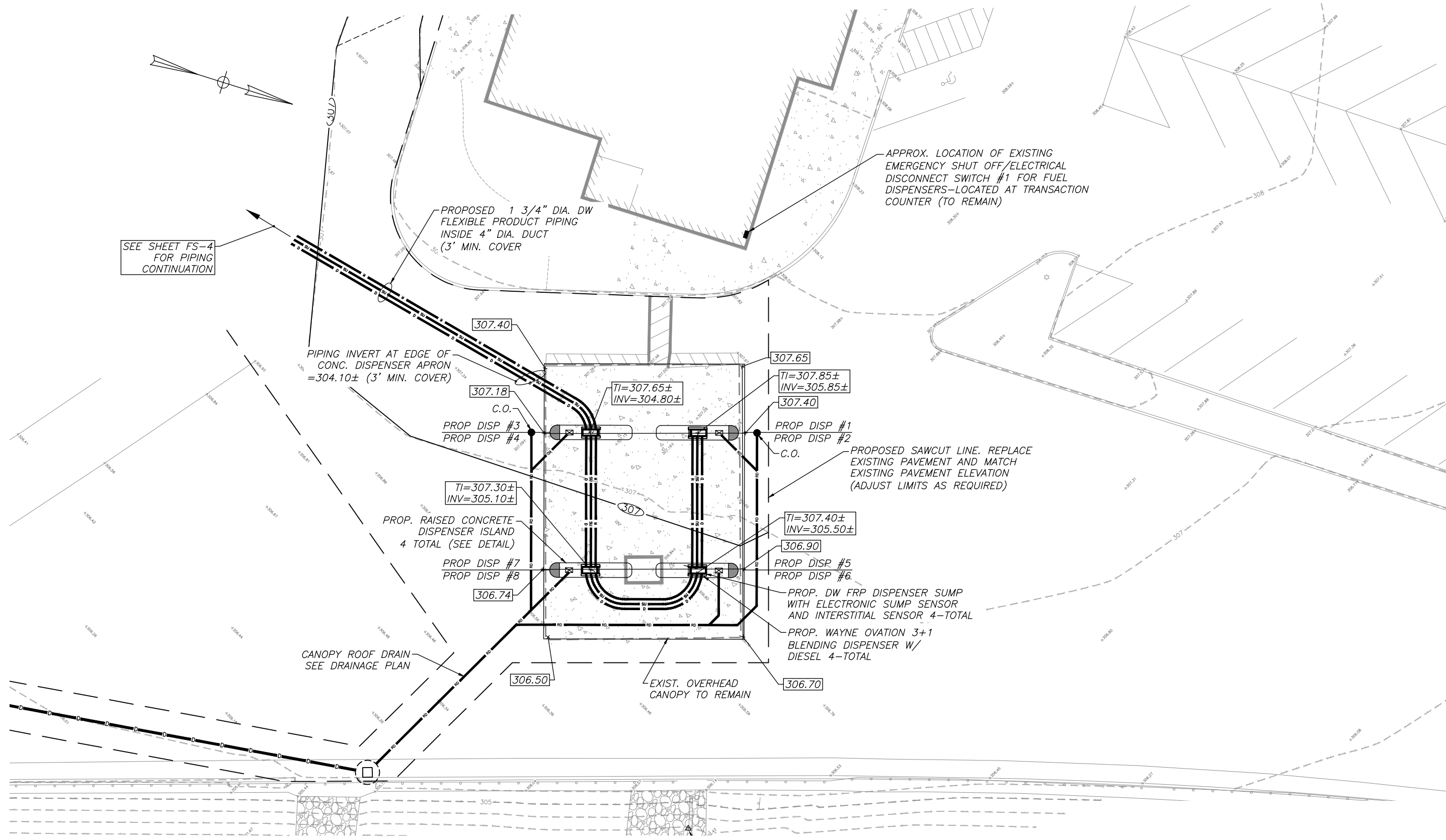
MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
GRADING PLAN - COMMERCIAL  
DIESEL FUELING STATION

SHEET NUMBER: FS-4  
CONTRACT: 2024.11  
25 OF 48

F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_TP1.dwg FUEL DESIGN (COMM. DSL) 4/05/24 12:39pm akuthumi

F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_TP1.dwg FUEL DESIGN (RETAIL) 4/05/24 12:39pm akuthumi



SCALE: 1" = 20' (11"x17")



Designed by:



HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909



**THE GOLD STAR  
 MEMORIAL HIGHWAY**

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8

GRADING PLAN - RETAIL FUELING STATION

No.	Revision	By	Date

	By	Date		By	Date
Designed	DJP	4/24	Checked	HS	4/24
Drawn	AK	4/24	In Charge of	FCM	4/24

CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CONTRACT: 2024.11

SHEET NUMBER: FS-5

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F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_TP-DET.dwg 1-EQUIPMENT LIST 4/05/24 12:39pm akuthumi


ITEM#	EQUIPMENT DESCRIPTION
1	CSI, DOUBLEWALL FRP FUEL STORAGE TANKS, UL STANDARD 1316, BRINE INTERSTITIAL, (1) 22" MANWAY PER TANK COMPARTMENT WITH (4) 4"NPT BUNGS, DW COLLARS, MANUFACTURER SUPPLIED TANK ANCHORING SYSTEM INCLUDING DEADMEN, HOLD DOWN STRAPS AND TURNBUCKLES
TANK # 13-1	15,000 GALLON (8'-0" OD x 44'-6 1/2") DW FRP, UL STANDARD 1316, UNDERGROUND FUEL STORAGE TANK W/ BRINE INTERSTITIAL MONITORING AND (1) 22" MANWAY WITH (4) 4" NPT BUNGS 15,000 GALLON - REGULAR
TANK # 14-1	15,000 GALLON (8'-0" OD x 44'-10 5/8") DW FRP, UL STANDARD 1316, UNDERGROUND MULTI-COMPARTMENT FUEL STORAGE TANK W/ BRINE INTERSTITIAL MONITORING AND (2) 22" MANWAYS WITH (4) 4" NPT BUNGS 10,000 GALLON BASE - DIESEL
TANK # 14-2	5,000 GALLON END - SUPER
PRODUCT DISPENSERS	
2a	WAYNE OVATION-2 (3+1) BLENDING DISPENSER (B-23)
2b	WAYNE OVATION HS ULTRA-HIGH CAPACITY MASTER/SATELLITE COMBO DIESEL DISPENSER
2c	WAYNE OVATION-2 ULTRA-HIGH CAPACITY SINGLE MASTER HI-1, SINGLE METER LO-1 DIESEL DISPENSER
EMERGENCY SHEAR VALVE	
3a	EMERGENCY SHEAR VALVE, 1-1/2" NPT, DOUBLE POPPET
3b	EMERGENCY SHEAR VALVE, 2" NPT, DOUBLE POPPET
3c	EMERGENCY SHEAR VALVE, 1-1/2" NPT, SINGLE POPPET (SATELLITE OUT ONLY)
SUBMERSIBLE TURBINE PUMP (FE PETRO)	
4a	4HP VARIABLE SPEED SUBMERSIBLE TURBINE PUMP
4b	4HP VARIABLE SPEED SUBMERSIBLE TURBINE PUMP W/ CORROSION PROTECTION
EXISTING VEEDER ROOT TLS-450PLUS CONSOLE WITH PRINTER AND UNIVERSAL PROBE/SENSOR INTERFACE MODULE TO REMAIN (CONTRACTOR TO PROVIDE ANY SOFTWARE OR HARDWARE UPGRADES REQUIRED)	
5a	SUMP LIQUID SENSOR #794380-208 WITH MOUNTING KIT
5b	MAGPLUS TANK LEVEL PROBE; 8'-0" DIA. TANK #846396-107
5c	DUAL POINT HYDROSTATIC BRINE RESERVOIR SENSOR #794380-303 (TANK)
5d	PROBE CAP AND ADAPTOR KIT
5e	INTERSTITIAL RISER CAP KIT, VEEDER ROOT #330020-435
5f	SINGLE-POINT MINI-HYDROSTATIC SENSOR #794380-304 (DW SUMPS)
PRODUCT PIPE - DOUBLEWALL FLEX PIPE IN DUCT	
6a	1-3/4" DOUBLE WALL POLYETHYLENE, COAXIAL FLEX PIPE, APT #XP-175-SC OR APPROVED EQUAL
6b	4" CORRUGATED DUCT PIPE, APT #DCT-400 OR APPROVED EQUAL
6c	1-3/4"FLEX x 2" NPT SWIVEL FITTING, APT #MS-XP-175-200
6d	1-3/4" SECONDARY TEST BOOT, APT #STB-175
6e	SECONDARY CONTAINMENT BY-PASS TUBE, APT #BPT-200
6f	CLAMSHELL NON-SWIVEL TEE FITTING, APT #TEE-XP-175
6g	CLAMSHELL NON-SWIVEL ELBOW FITTING, APT #ELB-XP-175
TANK VENT PIPING - SINGLEWALL FRP PIPE	
7a	3" SW FRP
7b	2" SW FRP
PIPING SUMPS	
8a	CSI, 42" TANK SUMP, FLAT SIDED, DW BRINE FILLED, FRP W/ WATERTIGHT COVER
8b	APT DISPENSER SUMP, DW BRINE FILLED FRP, CONDUITLESS W/ HYDROSTATIC MONITORING KIT AND STABILIZER KIT, APT #LMM-3914-36-W-D

ITEM#	EQUIPMENT DESCRIPTION
SUMP ENTRY FITTINGS	
9a	1-3/4" RIGID DUCTED DW ENTRY BOOT - FLAT SUMP, APT #RDEB-DW-175-SC
9b	3/4" RIGID CONDUIT ENTRY FITTING - FLAT SUMP.
SPILL CONTAINMENT MANHOLE, DW, POLY, THREAD-ON, NO DRAIN	
10a	FILL, COLOR CODED COVER, 15 GALLON
10b	STAGE I VAPOR RECOVERY COLOR CODED COVER, 5 GALLON, (REGULAR GASOLINE ONLY)
11	FILL DROP TUBE W/ MECHANICAL OVERFILL PREVENTION VALVE
12	BRASS SWIVEL FILL ADAPTER AND FILL CAP WITH RISER SEAL, EMCO WHEATON
13	BRASS SWIVEL VAPOR ADAPTER AND VAPOR ADAPTER CAP, EMCO WHEATON
VAPOR EXTRACTOR VALVE	
14a	4" x 4" x 3" EXTRACTOR VALVE
14b	4" x 4" x 2" EXTRACTOR VALVE
14c	4" VALVE RISER CAP
VENT RISER CAPS	
15a	3" NPT PRESSURE VACUUM EVR VENT CAP, 2"-3" WC PRES., 8" WC VAC. (DIESEL)
15b	2" SLIP-ON ATMOSPHERIC VENT CAP (DIESEL)
SURFACE MANHOLES AND MONITORING WELLS	
16a	42" COMPOSITE LOCKING WATERTIGHT MANHOLE
16b	18" CAST IRON MANHOLE
16c	12" CAST IRON MANHOLE
16d	12" OBSERVATION WELL MANHOLE
16e	4"x15' OBSERVATION WELL SCREEN PIPE
16f	4" OBSERVATION WELL PLUG
17	2" BALL VALVE
18	APPROVED BACKFILL FOR TANK (SEE REFERENCE WITHIN TANK FIELD CROSS SECTION)
19	RIGID METAL CONDUIT (RMC) (3/4")
20	EXPLOSION PROOF CONDUIT SEALING FITTING (SEAL-OFF) FILLED W/ UL-LISTED SEALING COMPOUND
21	JUNCTION BOX - GUP SERIES, EXPLOSION PROOF (16 CU.IN. MIN.)
22	HIGH LEVEL ALARM AND ACKNOWLEDGEMENT SWITCH
23	REMOTE FUEL SHUT-OFF PUSH BUTTON WITH TAMPER PROOF COVER
24	UNIVERSAL HI-HOSE RETRIEVER W/HOSECRADLE

**NOTE:**


- ITEM NUMBERS REFER TO SHEETS FS-11 THROUGH FS-17.

Scale:			
No.	Revision	By	Date

Designed by:			
			
By	Date	By	Date
Designed	DJP 4/24	Checked	HS 4/24
Drawn	AK 4/24	In Charge of	FCM 4/24

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

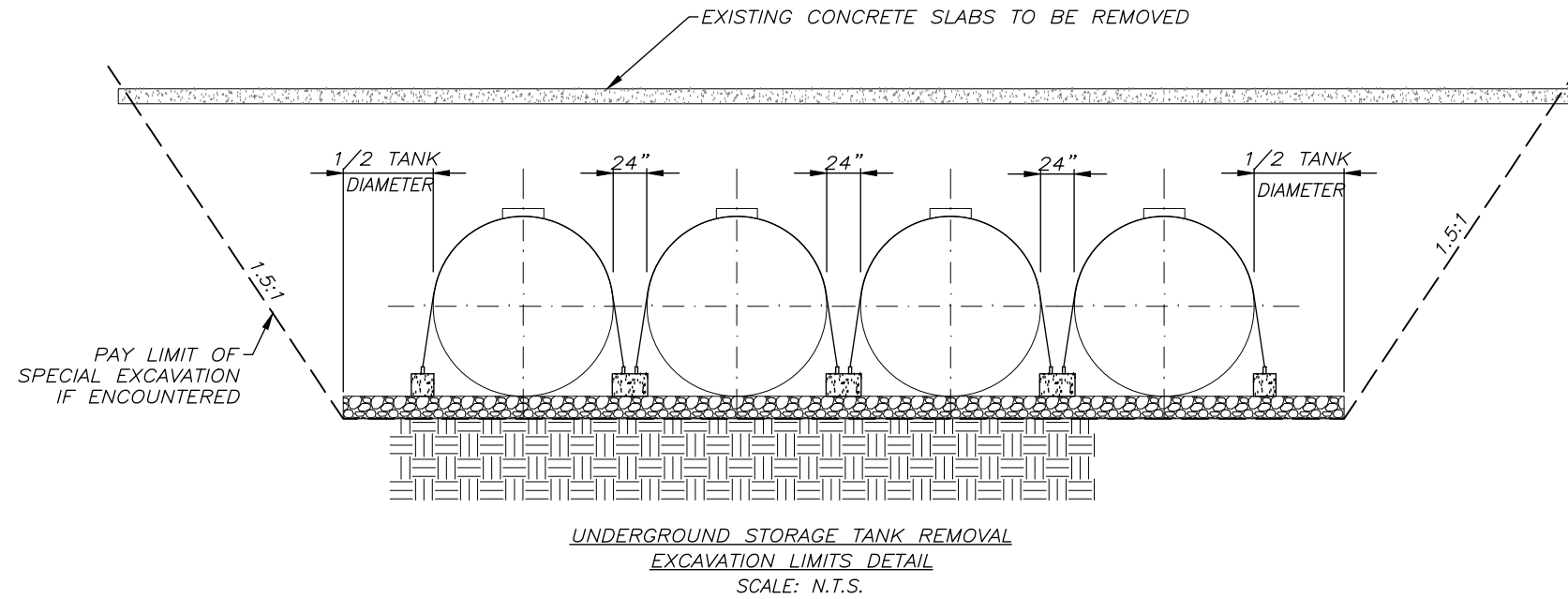


**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

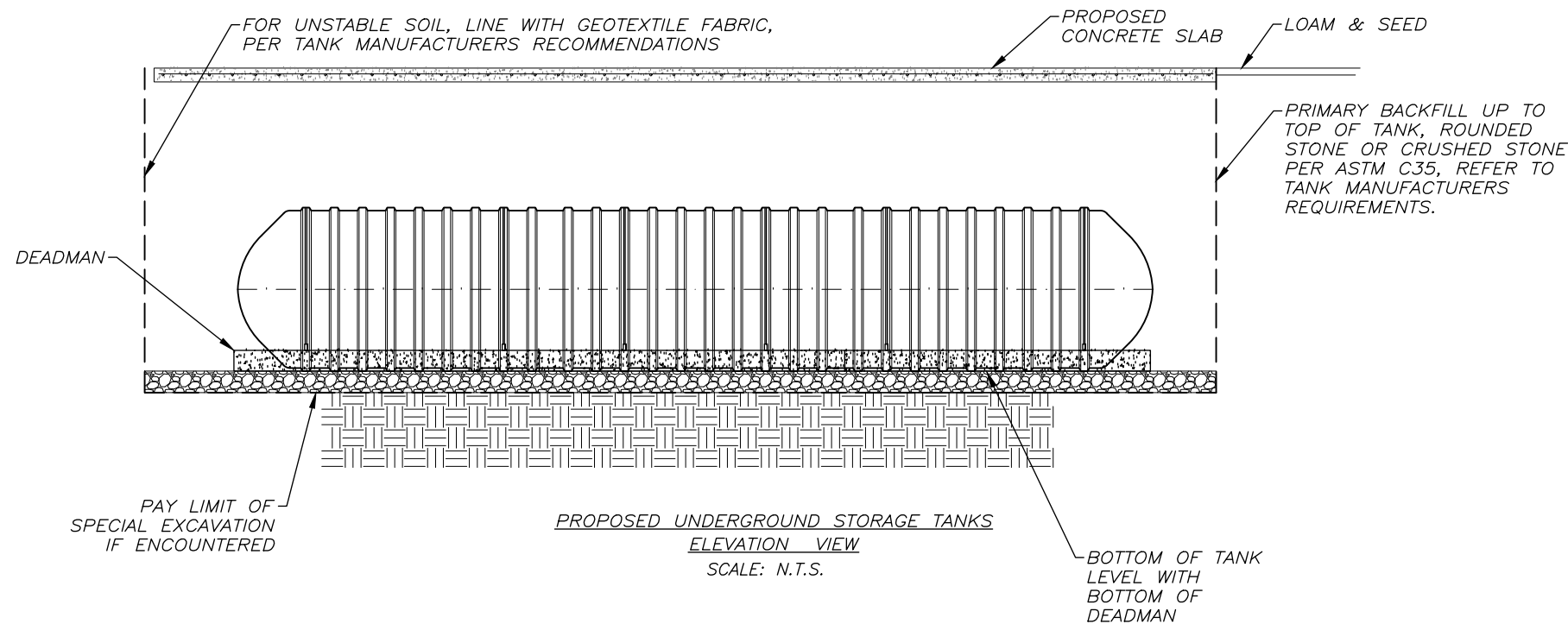
CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 EQUIPMENT LIST

SHEET NUMBER: FS-6  
 CONTRACT: 2024.11  
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NOTES:

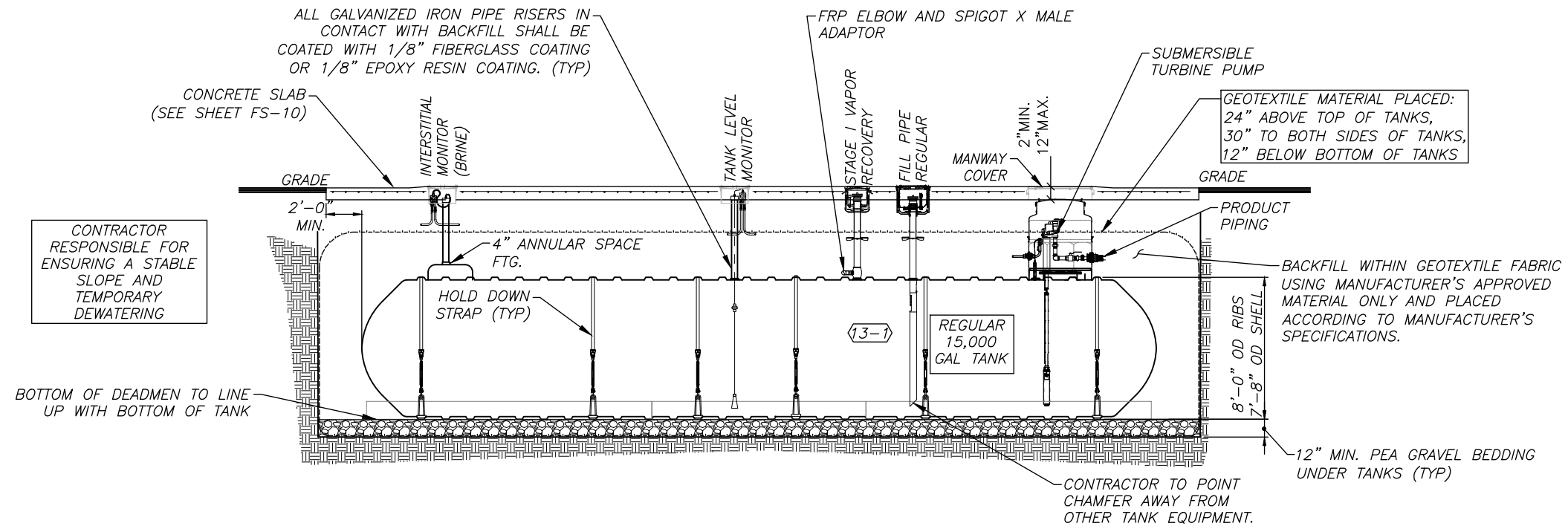
1. REFER TO TANK MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION REQUIREMENTS, SUPPLIED, AND REQUIRED ACCESSORIES.
2. CONTRACTOR TO SET UST BURIAL DEPTH BASED ON MEETING THE REQUIRED 1/8 in/ft MINIMUM FUEL PIPE SLOPE AND MINIMUM PIPE BURIAL DEPTH. ALL FUEL PIPES TO DRAIN BACK TO THE USTS. SEE PIPING PROFILE ON SHEET FS-16



PEA GRAVEL	CRUSHED STONE
<p>3/4 in. (19 mm) Maximum Size</p>	<p>1/2 in. (12 mm) Maximum Size</p>
<p>Pea Gravel: <b>Clean naturally-rounded aggregate with particle sizes no larger than 3/4 in. with no more than 5% passing a #8 sieve.</b> Dry bulk density, per ASTM C29, must be a minimum of 95 pounds per cubic foot. The backfill must meet the fine aggregate requirements for deleterious substances and soundness of ASTM C33.</p>	<p>Crushed Stone or Gravel: <b>Washed, with angular particle sizes no larger than 1/2 in. with no more than 5% passing a #8 sieve.</b> Dry bulk density, per ASTM C29, must be a minimum of 95 pounds per cubic foot. The backfill must meet the fine aggregate requirements for deleterious substances and soundness of ASTM C33.</p>

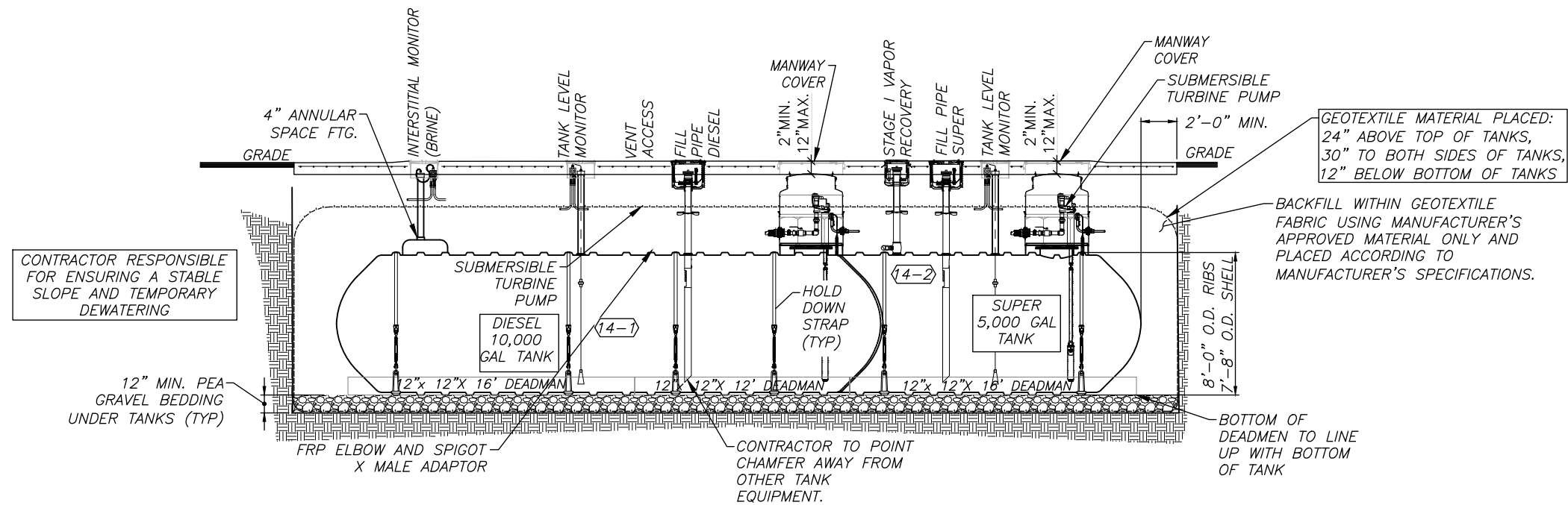
F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_TP-DET.dwg 2 - TANK EXCAVATION DET 4/05/24 12:39pm akuthumi

Scale:	Designed by: 	HNTB CORPORATION 82 Running Hill Road, Suite 201 South Portland, ME 04106 TEL (207) 774-5155 FAX (207) 228-0909		<b>THE GOLD STAR MEMORIAL HIGHWAY</b>	CUMBERLAND SERVICE PLAZA FUEL SYSTEM REPLACEMENT SOUTHBOUND MM 58.8 TANK EXCAVATION DETAILS																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>		No.	Revision	By	Date					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>DJP 4/24</td> <td>Checked</td> <td>HS 4/24</td> </tr> <tr> <td>Drawn</td> <td>AK 4/24</td> <td>In Charge of</td> <td>FCM 4/24</td> </tr> </tbody> </table>		By	Date	By	Date	Designed	DJP 4/24	Checked	HS 4/24	Drawn	AK 4/24	In Charge of	FCM 4/24	CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.	MTA PROJECT MANAGER: Ryan J. Barnes, P.E.	CONTRACT: 2024.11
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Drawn	AK 4/24	In Charge of	FCM 4/24																							
					SHEET NUMBER: FS-7 28 OF 48																					



**15,000 GALLON UNDERGROUND STORAGE TANK**

SCALE: 1/8" = 1'-0" (11"x17")



**15,000 GALLON (10K/5K SPLIT) UNDERGROUND COMPARTMENTAL STORAGE TANK**

SCALE: 1/8" = 1'-0" (11"x17")

**NOTES:**

1. THESE DETAILS FOR THE TANK TOP LAYOUT ARE PROVIDED FOR CONTRACTORS INFORMATION, FINAL TANK SHOP DRAWINGS SHALL BE OBTAINED FROM CONTAINMENT SOLUTIONS AND PROVIDED THROUGH THE SHOP REVIEW PROCESS

No.	Revision	By	Date

Designed by:			
	By	Date	
	By	Date	
	By	Date	
	By	Date	

HNTB CORPORATION  
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 South Portland, ME 04106  
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 Dale A. Mitchell, P.E.

**THE GOLD STAR  
MEMORIAL HIGHWAY**

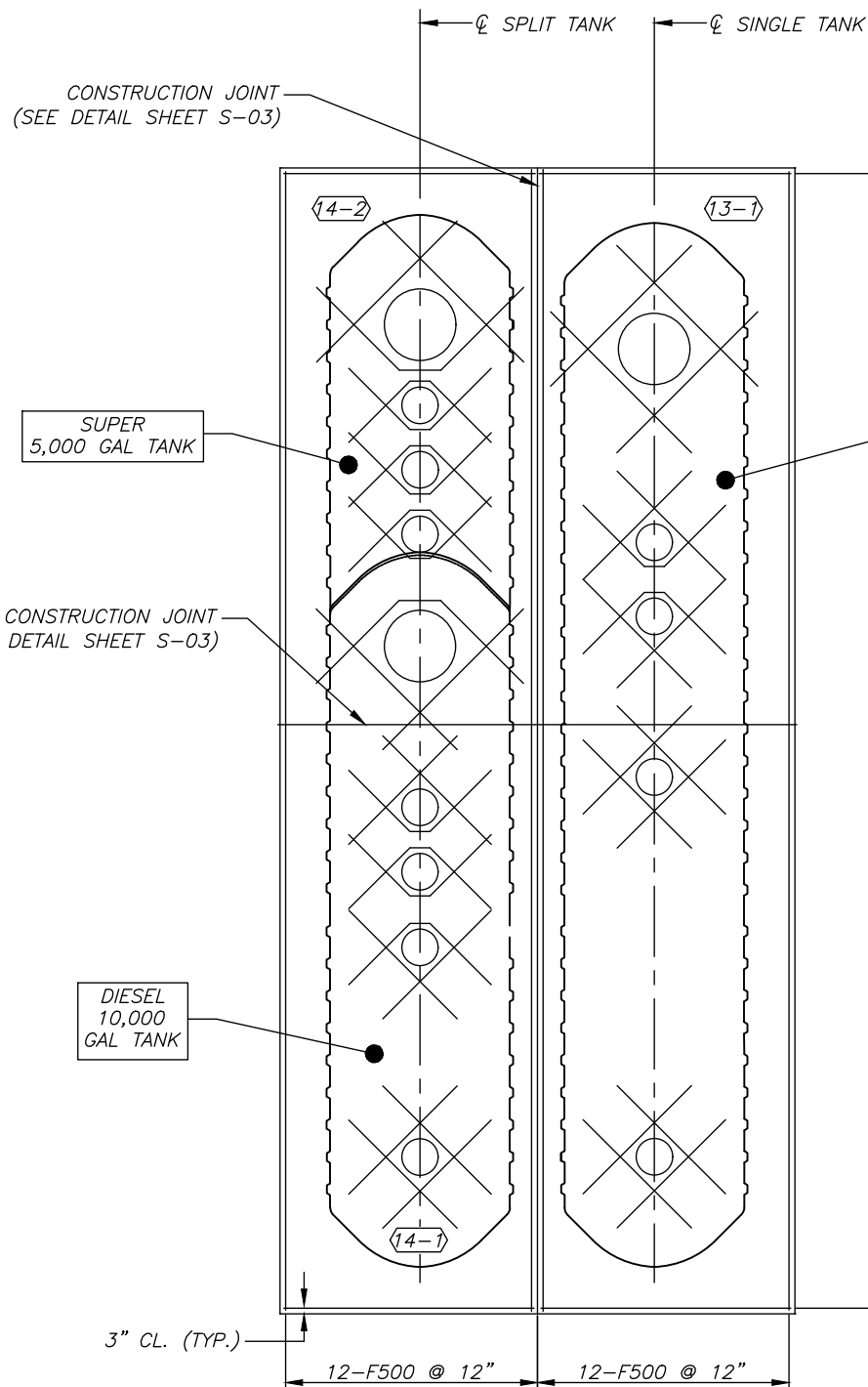
MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 FUEL TANK ELEVATION DETAILS

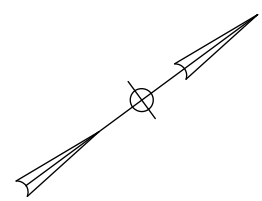
SHEET NUMBER: FS-8  
 CONTRACT: 2024.11  
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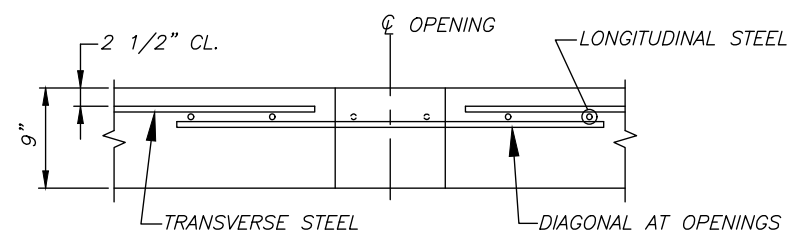


**PLAN**  
**FUEL TANK SLAB**  
SCALE: 1/8" = 1'-0" (11"x17")



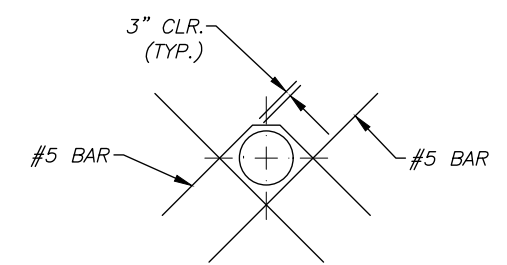
MARK	SIZE	NO.	LENGTH	TYPE
F500	5	24	48'-6"	STR
F501	5	50	11'-0"	STR
F502	5	56	9'-6"	STR

**CONC. TANK PAD REINFORCING SCHEDULE**

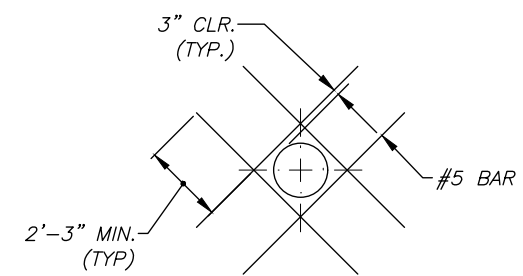


**TYPICAL SECTION**  
**AT SLAB OPENING**

SCALE: NTS



**OPENING WITH ADJACENT OPENING**



**ISOLATED OPENING**

**OPENING**  
**REINFORCING**

SCALE: 1/8" = 1'-0" (11"x17")

**NOTES:**

- FOR NOTES SEE SHEET S-01.
- FOR SLAB AND OPENING LAYOUT SEE SHEET FS-9.
- CONTRACTOR SHALL SUBMIT PROPOSED SUPPLEMENTAL OPENING REINFORCING FOR APPROVAL.
- FIELD CUT F500 AND F501 AS REQUIRED AT OPENING.

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No.	Revision	By	Date

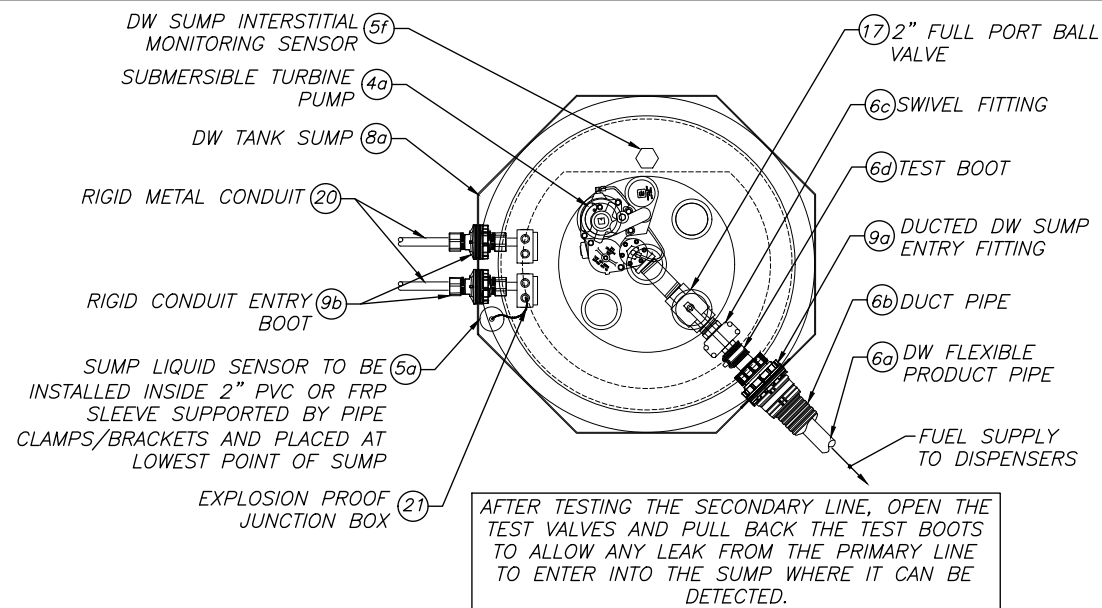
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By	Date	By	Date	By	Date	By	Date
Designed	DJP 4/24	Checked	HS 4/24				
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**THE GOLD STAR**  
**MEMORIAL HIGHWAY**

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
REINFORCING DETAILS FOR CONCRETE  
SLABS AT FUEL STORAGE TANKS

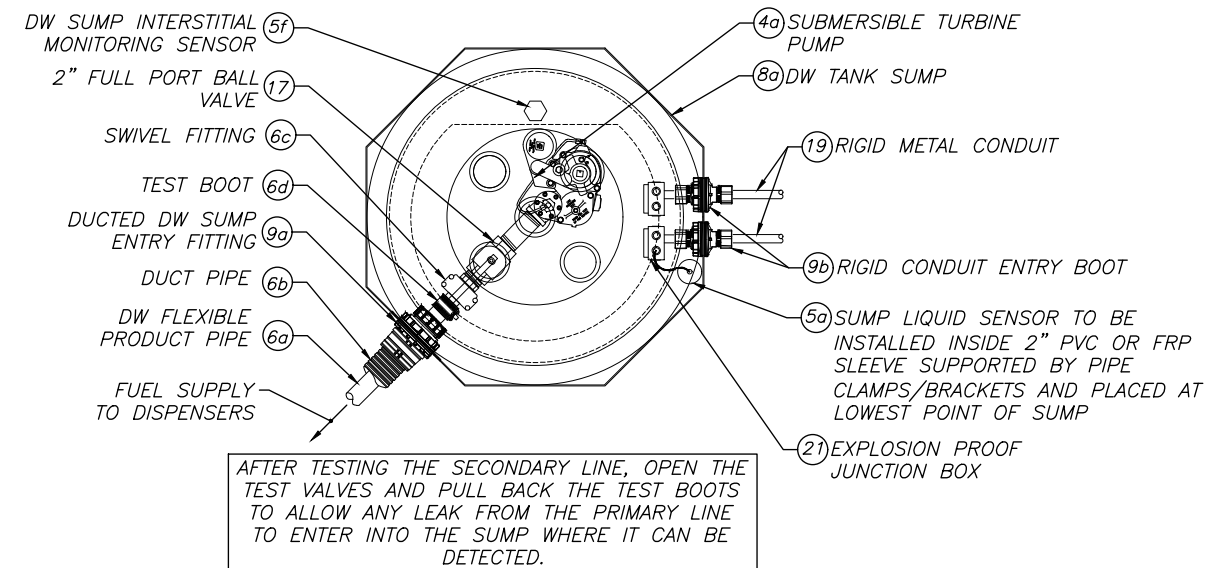
SHEET NUMBER: FS-10  
CONTRACT: 2024.11  
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**REGULAR SUMP DETAIL**

SCALE: 1/2" = 1'-0" (11"X17")

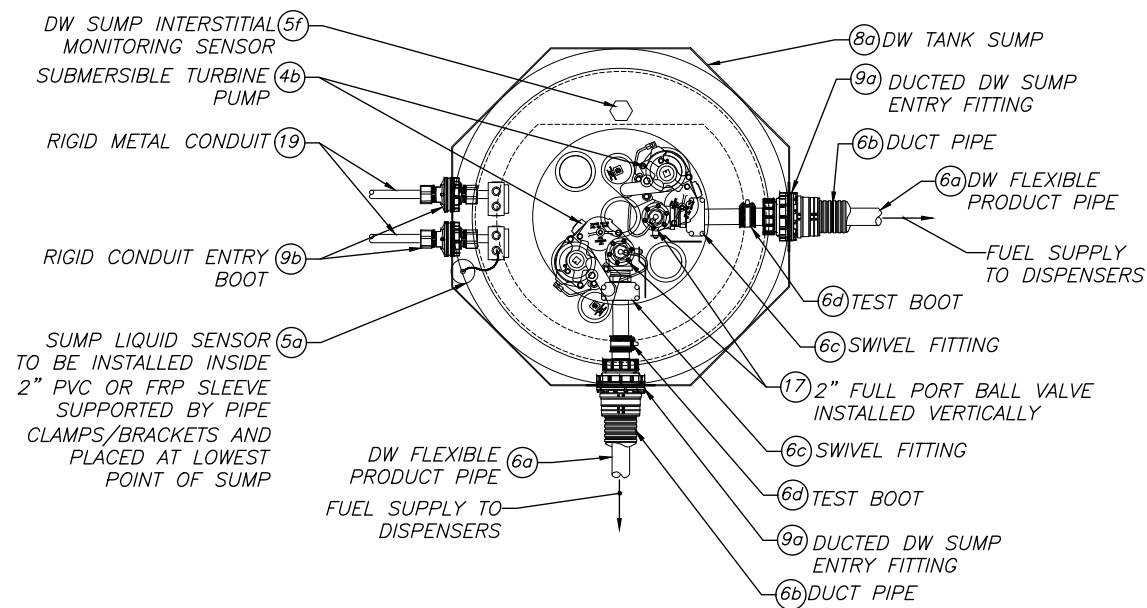
AFTER TESTING THE SECONDARY LINE, OPEN THE TEST VALVES AND PULL BACK THE TEST BOOTS TO ALLOW ANY LEAK FROM THE PRIMARY LINE TO ENTER INTO THE SUMP WHERE IT CAN BE DETECTED.



**SUPER SUMP DETAIL**

SCALE: 1/2" = 1'-0" (11"X17")

AFTER TESTING THE SECONDARY LINE, OPEN THE TEST VALVES AND PULL BACK THE TEST BOOTS TO ALLOW ANY LEAK FROM THE PRIMARY LINE TO ENTER INTO THE SUMP WHERE IT CAN BE DETECTED.

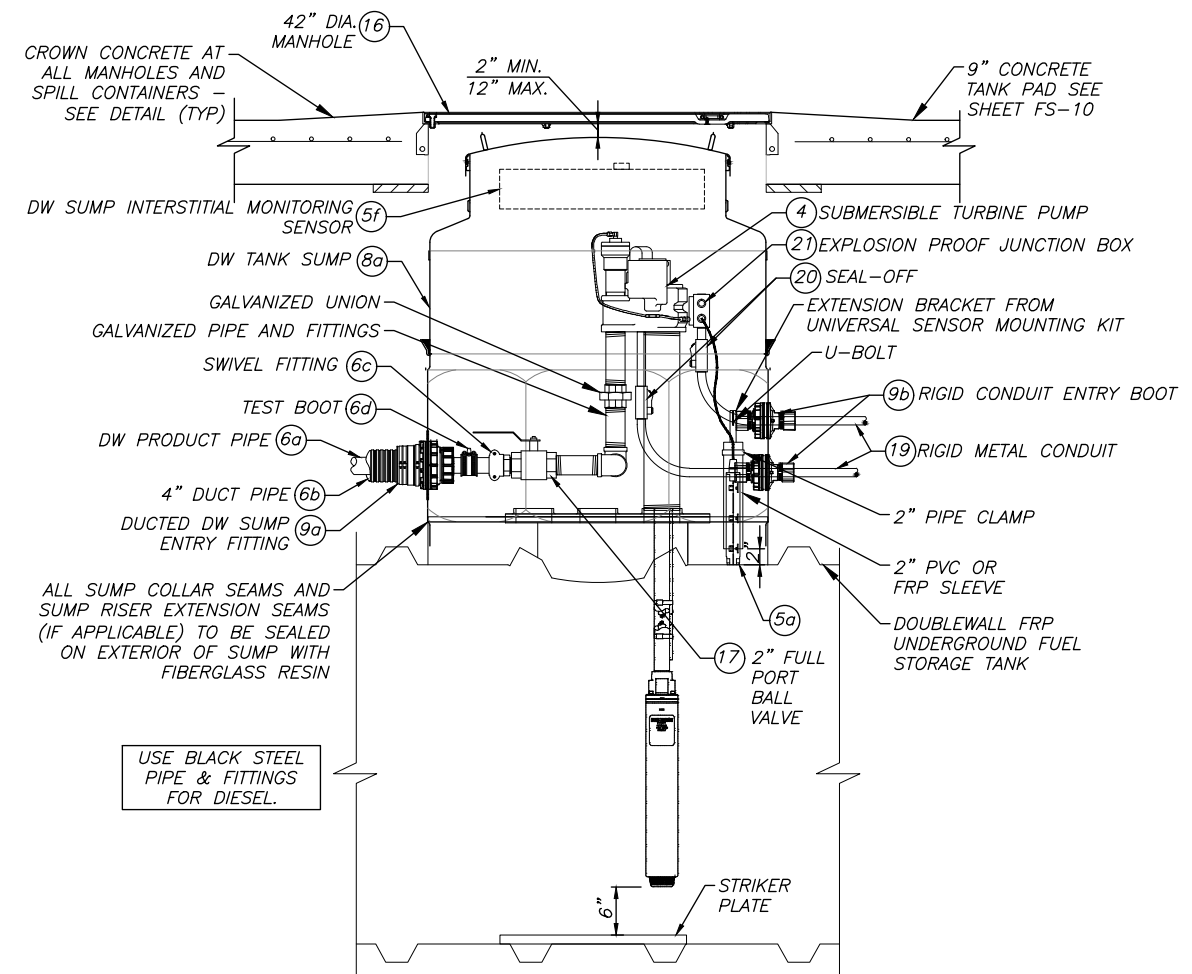


**DIESEL SUMP DETAIL**

SCALE: 1/2" = 1'-0" (11"X17")

USE BLACK STEEL PIPE & FITTINGS FOR DIESEL. GALV. STEEL NOT TO BE USED IN DIESEL SUMPS

AFTER TESTING THE SECONDARY LINE, OPEN THE TEST VALVES AND PULL BACK THE TEST BOOTS TO ALLOW ANY LEAK FROM THE PRIMARY LINE TO ENTER INTO THE SUMP WHERE IT CAN BE DETECTED.



**TYPICAL TANK SUMP**

SCALE: 3/8" = 1'-0" (11"X17")

USE BLACK STEEL PIPE & FITTINGS FOR DIESEL.

F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_TP-DET.dwg 6-TANK SUMP PLAN 4/05/24 12:39pm akuthumi

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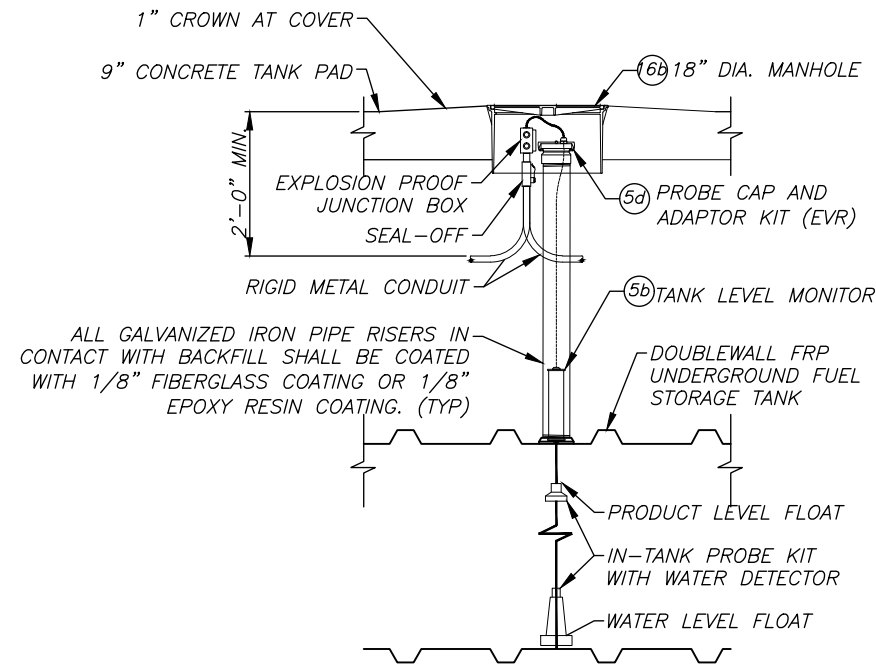
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 TANK SUMP PLAN

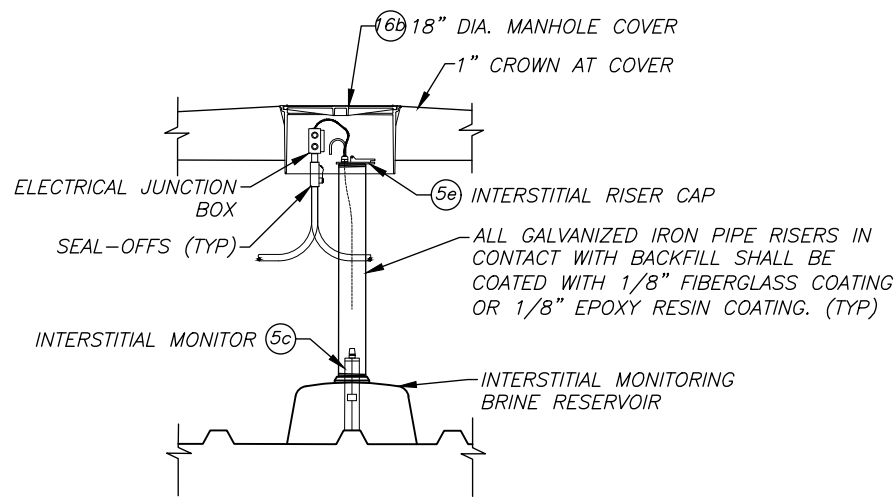
SHEET NUMBER: FS-11  
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**TANK LEVEL MONITOR**

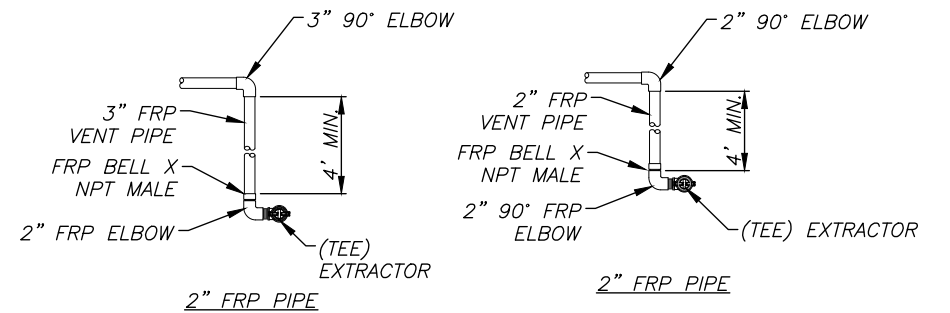
SCALE: 3/8" = 1'-0" (11"x17")



**INTERSTITIAL SENSOR DETAIL (BRINE)**

SCALE: 3/8" = 1'-0" (11"x17")

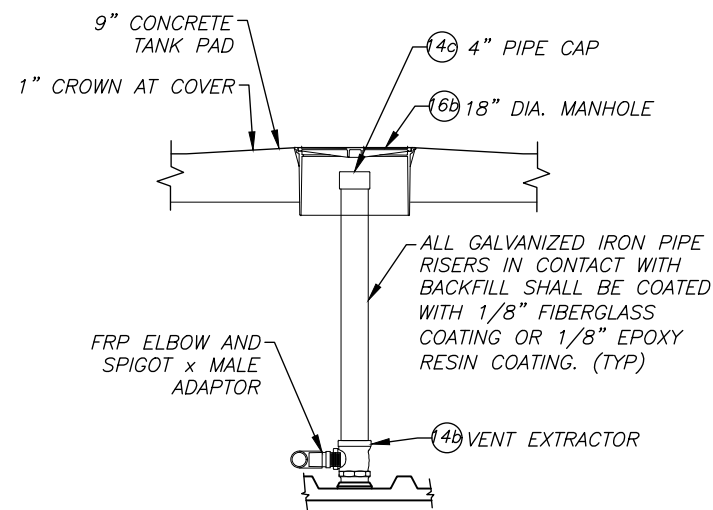
FRP DOGLEG TO BE PROVIDED AT EACH CONNECTION TO A FIXED POINT (TANK, DISPENSER, VENT ETC.) (MEASURED BETWEEN FITTINGS)



NOTE: CHANGES IN DIRECTION NOT ATTACHED TO A RIGID CONNECTION SHALL NOT HAVE A STRAIGHT RUN OF LESS THAN 4' ON ONE SIDE OF THE CONNECTION.

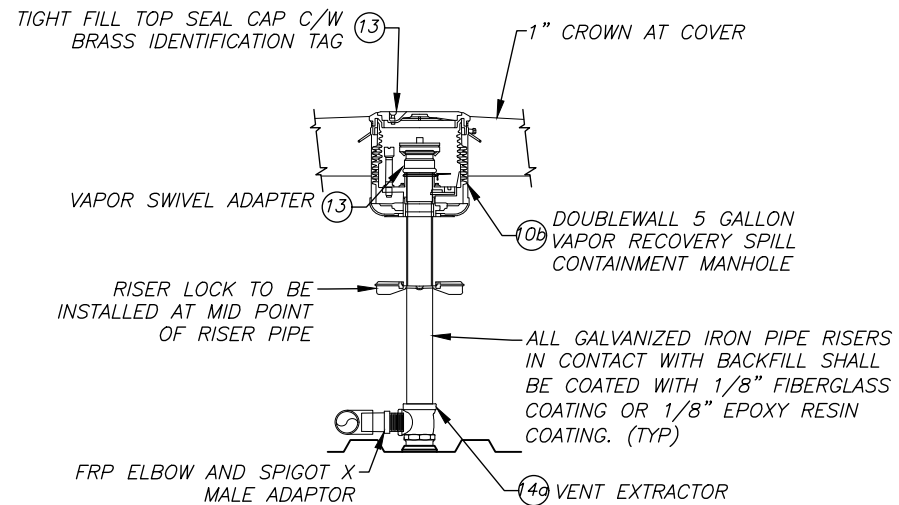
**FRP DOGLEG DETAIL**

SCALE: N.T.S.



**VENT ACCESS DETAIL (DIESEL)**

SCALE: 3/8" = 1'-0" (11"x17")



**VAPOR RECOVERY DETAIL**

SCALE: 3/8" = 1'-0" (11"x17")

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Scale:		Designed by:	
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Drawn	AK 4/24	In Charge of	FCM 4/24

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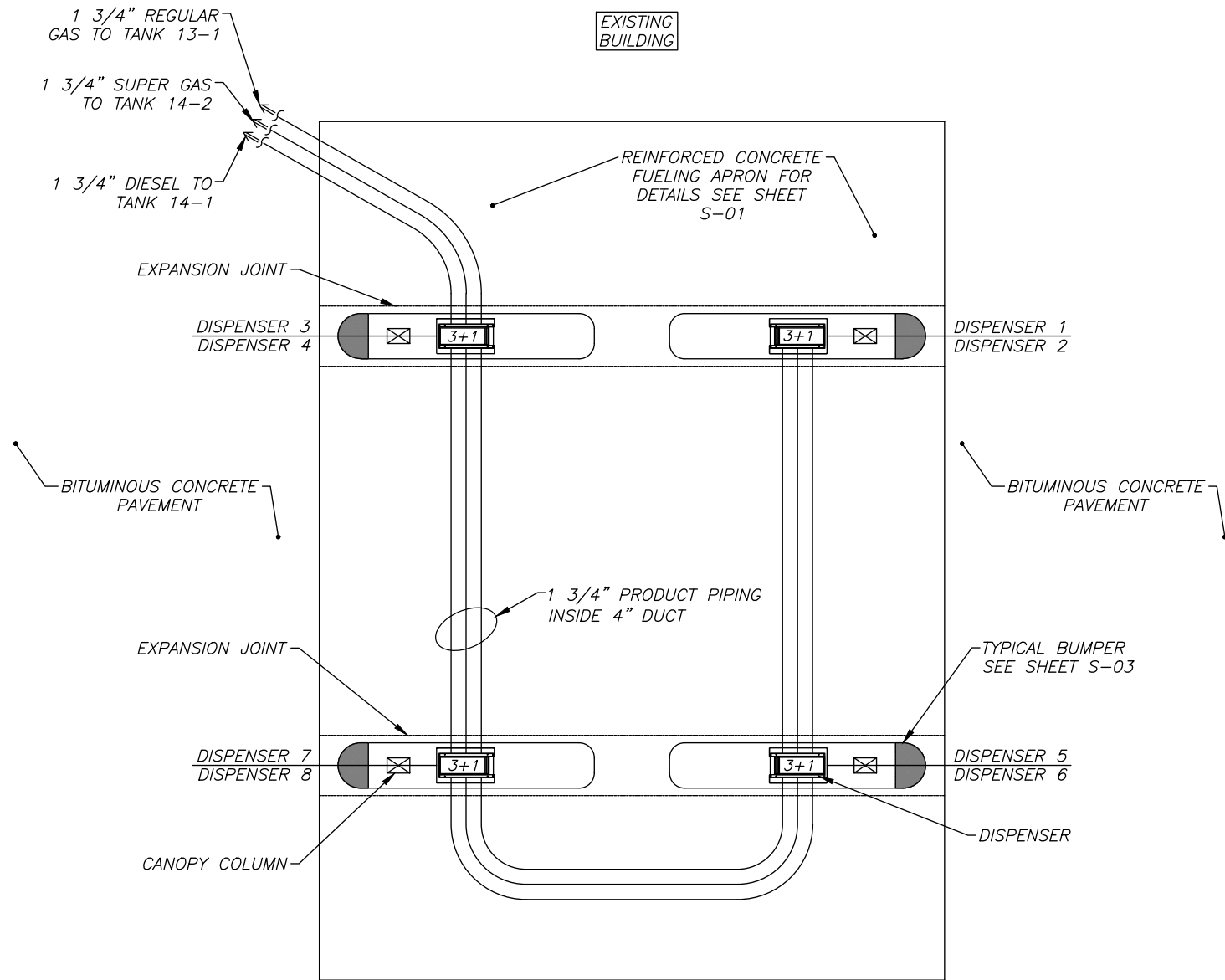
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

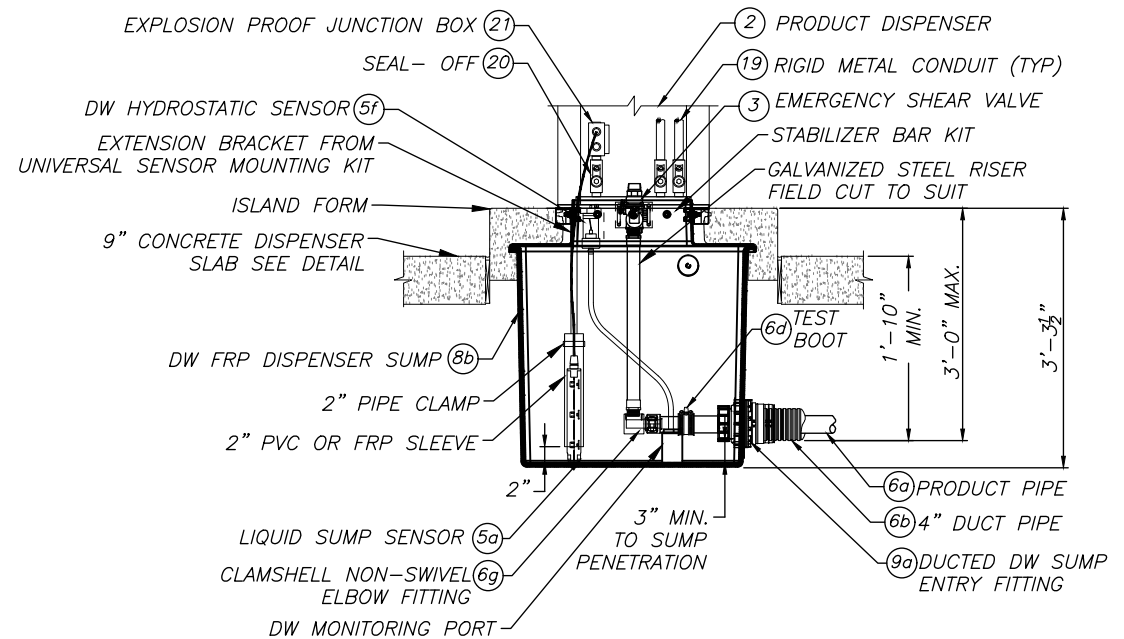
CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 FUEL TANK RISER DETAILS

SHEET NUMBER: FS-12  
 CONTRACT: 2024.11  
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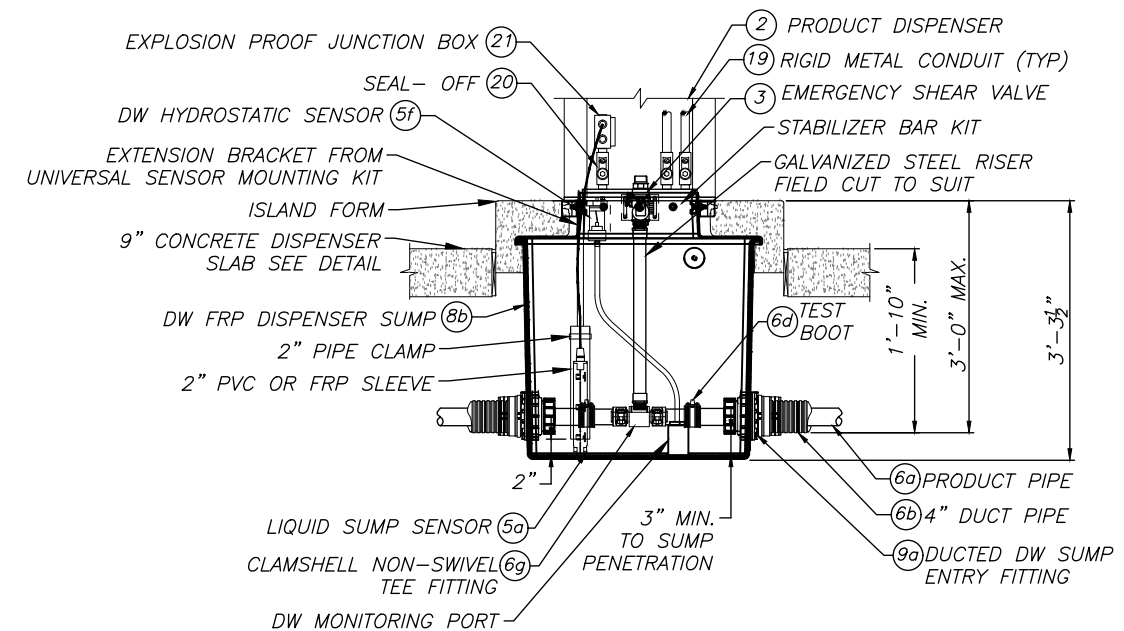
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**GASOLINE ISLAND PLAN**  
 SCALE: 3/32" = 1'-0" (11"X17")



USE BLACK STEEL PIPE & FITTINGS FOR DIESEL.  
**END OF LINE DISPENSER SUMP DETAIL**  
 SCALE: 1/2" = 1'-0" (11"X17")



USE BLACK STEEL PIPE & FITTINGS FOR DIESEL.  
**INLINE DISPENSER SUMP DETAIL**  
 SCALE: 1/2" = 1'-0" (11"X17")

Scale:		Designed by:	
No.	Revision	By	Date

<p>Greenman-Pedersen, Inc.          44 Stiles Road, Suite One          Salem, NH 03079</p>		<p>HNTB CORPORATION          82 Running Hill Road, Suite 201          South Portland, ME 04106          TEL (207) 774-5155          FAX (207) 228-0909</p>	
By	Date	By	Date
Designed	DJP 4/24	Checked	HS 4/24
Drawn	AK 4/24	In Charge of	FCM 4/24

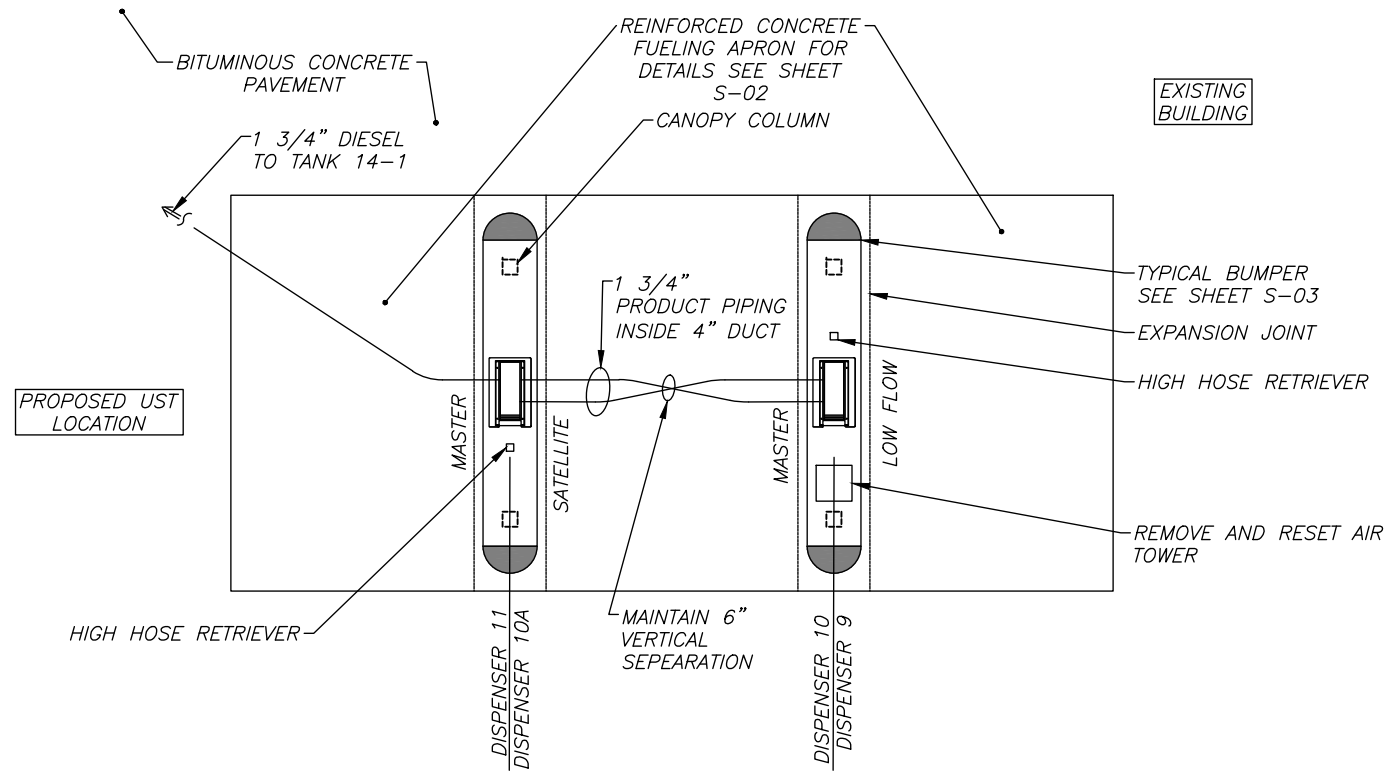
CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 DISPENSER ISLAND PIPING PLAN

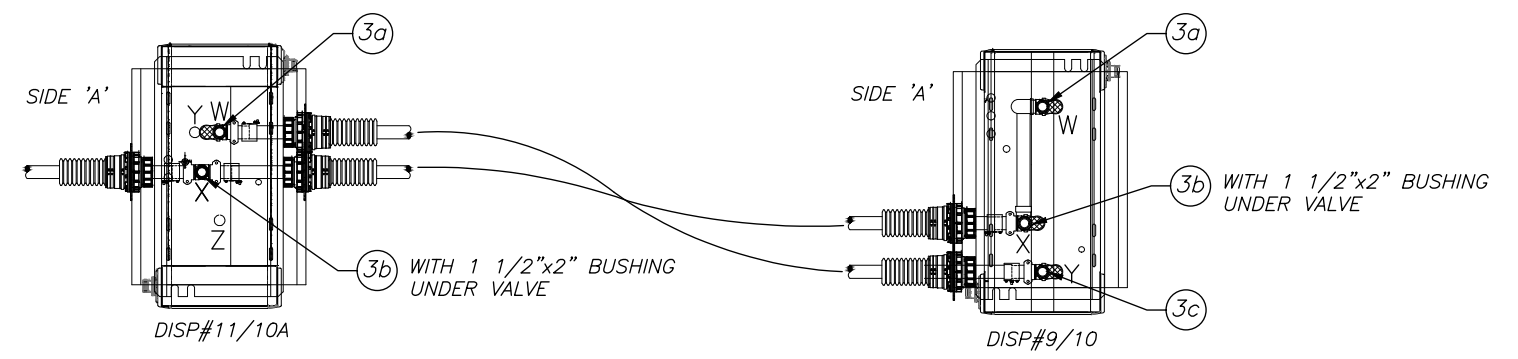
SHEET NUMBER: FS-13  
 CONTRACT: 2024.11  
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**DIESEL ISLAND PLAN**  
SCALE: 3/32" = 1'-0" (11"X17")

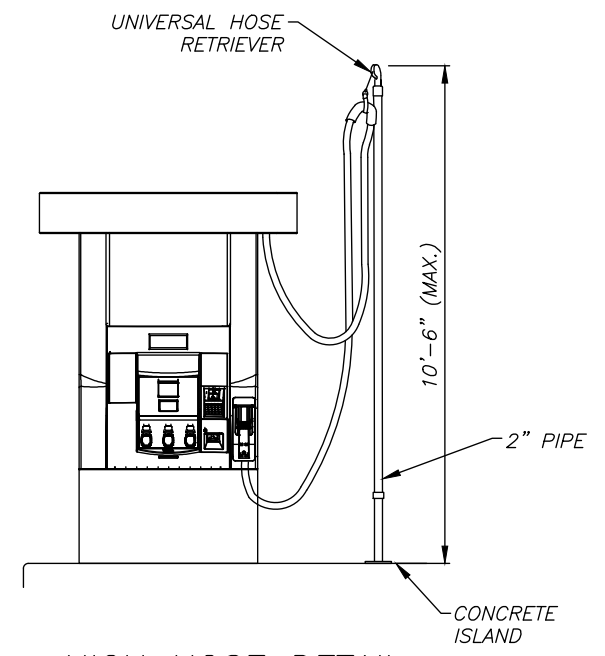
W	INLET FROM SATELLITE
X	INLET FROM TANK
Y	NOT USED
Z	NOT USED

W	LOW FLOW INLET
X	INLET FROM TANK
Y	OUTLET TO SATELLITE

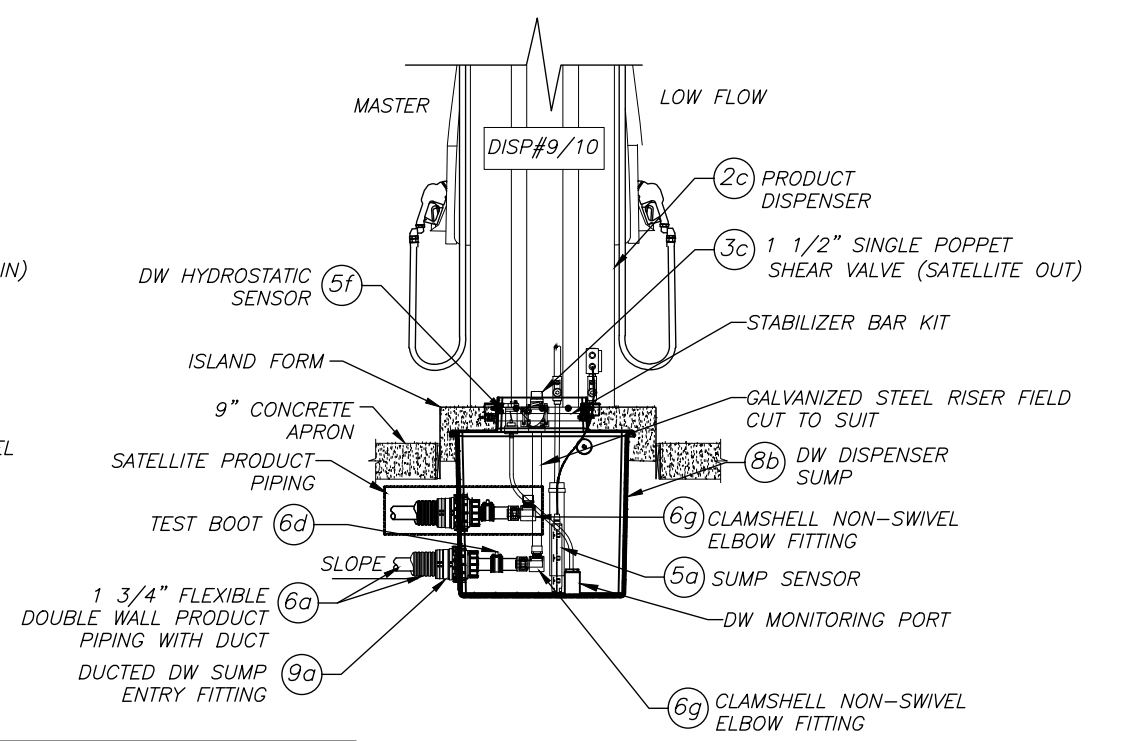
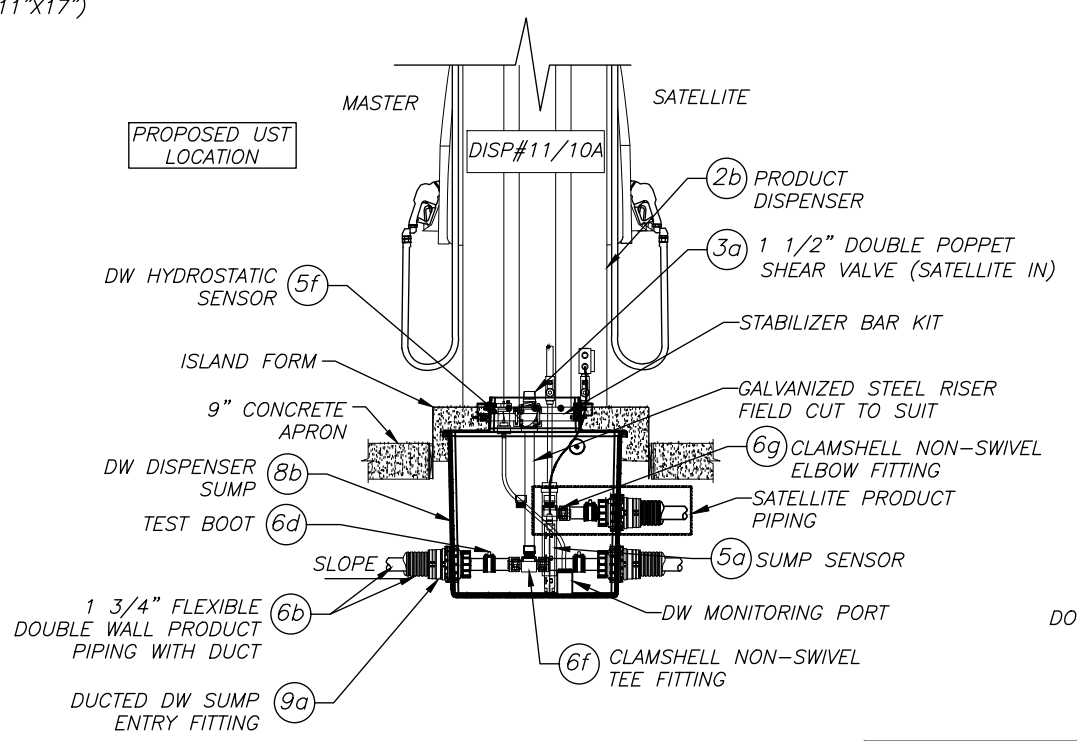


USE BLACK STEEL PIPE & FITTINGS FOR DIESEL.

**COMMERCIAL DIESEL DISPENSER SUMP PIPING PLAN**  
SCALE: 3/8" = 1'-0" (11"X17")



**HIGH HOSE DETAIL**  
SCALE: NOT TO SCALE



USE BLACK STEEL PIPE & FITTINGS FOR DIESEL.

**DIESEL ISLAND DISPENSER PLAN**  
SCALE: 3/8" = 1'-0" (11"X17")


F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_TP-DET.dwg 9-COMMERCIAL DIESEL ISLAND 4/05/24 12:39pm okuthumi

Scale:			
No.	Revision	By	Date

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By	Date	By	Date
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Drawn	AK 4/24	In Charge of	FCM 4/24

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.



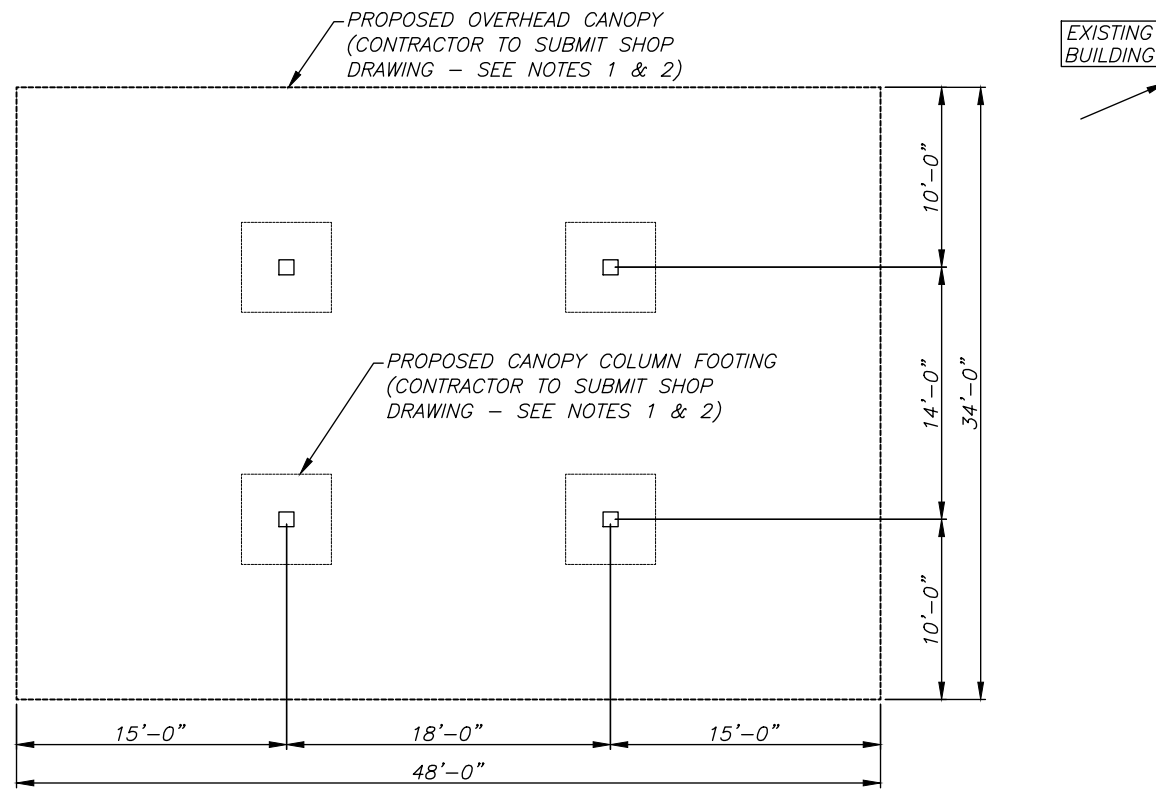
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
DISPENSER ISLAND PIPING PLAN

SHEET NUMBER: FS-14  
CONTRACT: 2024.11  
35 OF 48

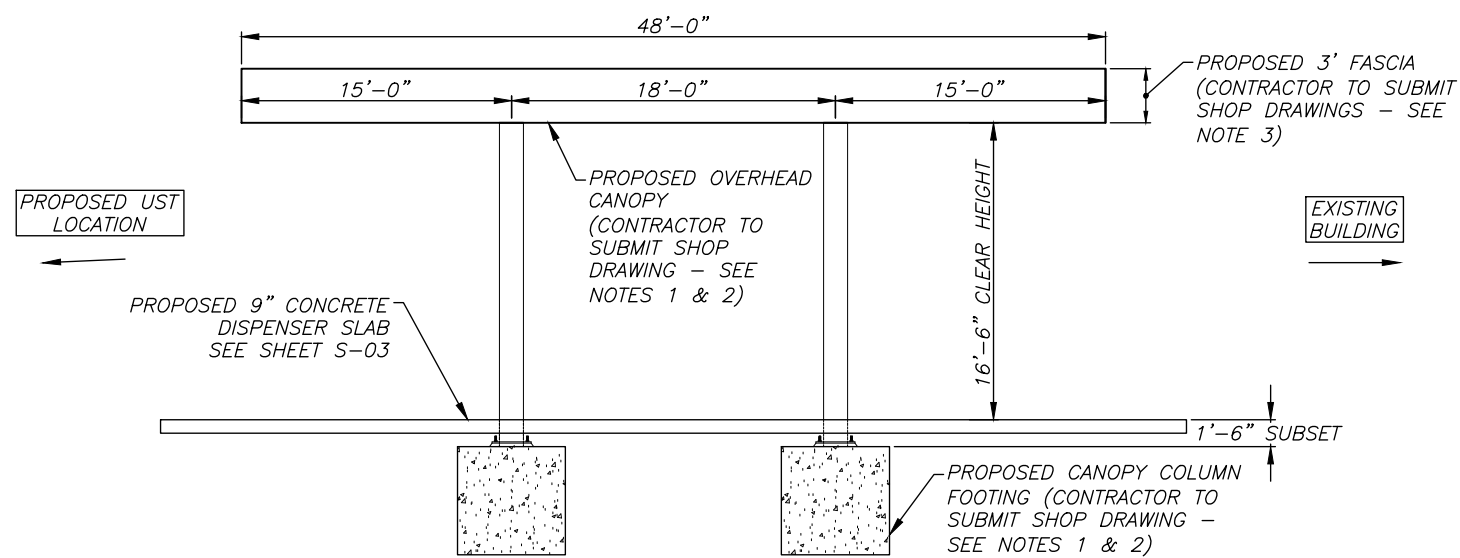
F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_IP-DET.dwg 10-DIESEL CANOPY PLAN AND ELEVATION 4/05/24 12:39pm okuthumi



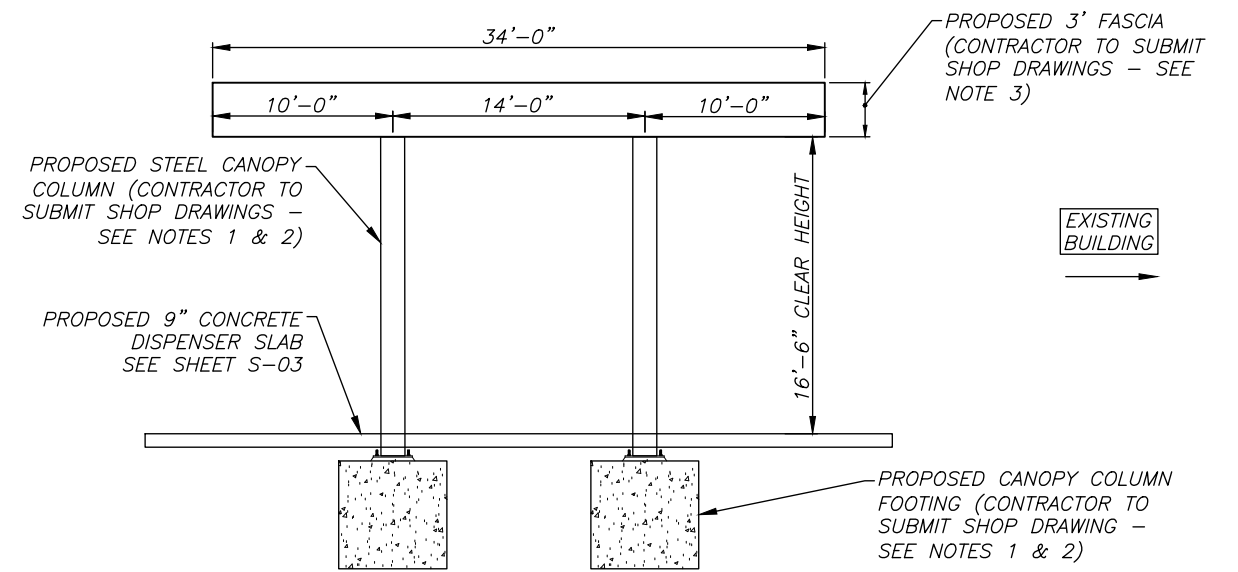
**CANOPY PLAN VIEW**  
SCALE: 3/32" = 1'-0" (11"X17")

**NOTES:**

- 1) THE CONTRACTOR SHALL DESIGN, FURNISH, ASSEMBLE AND INSTALL A FUELING CANOPY, INCLUDING CONCRETE FOOTINGS, STEEL COLUMNS, FIRE SUPPRESSION, AND LIGHTING, IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS, MANUFACTURER'S SPECIFICATIONS AND SECTION 804 OF THE TECHNICAL SPECIFICATIONS.
- 2) CONTRACTOR SHALL SUBMIT FOR APPROVAL DETAILED SHOP DRAWINGS AND CALCULATIONS FOR THE PROPOSED CANOPY AND ASSOCIATED FOUNDATIONS. THESE SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A MAINE LICENSED PROFESSIONAL ENGINEER, FOR APPROVAL WITHIN 21 DAYS OF CONTRACT AWARD.
- 3) CONTRACTOR SHALL SUBMIT A FIRE SUPPRESSION PLAN FOR THE DIESEL CANOPY USING THE PYROCHEM ATTENDANT II PRE-ENGINEERED FIRE SUPPRESSION SYSTEM. CLEARANCE TO THE BOTTOM OF THE FIRE SUPPRESSION NOZZLES, FROM THE GROUND, SHALL BE 15'-0" MINIMUM.
- 4) DIESEL DISPENSER CANOPY SHOWN. EXISTING GAS CANOPY TO REMAIN.
- 5) C.N BROWN WILL PROVIDE CANOPY DECALS FOR FACTORY TO INSTALL. CONTRACTOR TO COORDINATE WITH RESIDENT AND C.N BROWN ACCORDINGLY.
- 6) PAYMENT FOR CANOPY DRAINAGE SHALL BE INCIDENTAL TO NEW DIESEL CANOPY INSTALLATION.



**FRONT ELEVATION**  
SCALE: 3/32" = 1'-0" (11"X17")



**SIDE ELEVATION**  
SCALE: 3/32" = 1'-0" (11"X17")

Scale:		Designed by:	
No.	Revision	By	Date

Designed by: **GPI** Engineering Design Planning Construction Management  
603.893.0720 GPINET.COM  
Greenman-Pedersen, Inc.  
44 Stiles Road, Suite One  
Salem, NH 03079

By	Date	By	Date
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Drawn	AK 4/24	In Charge of	FCM 4/24

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

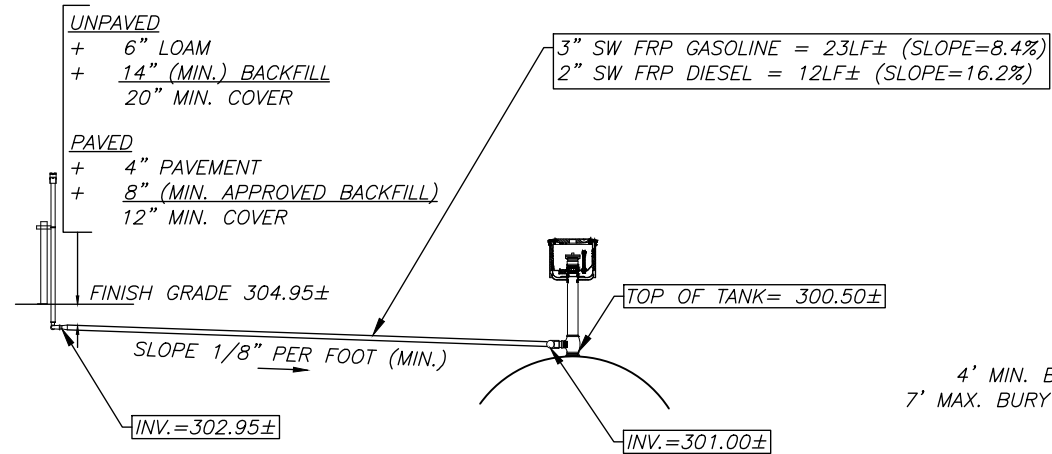
**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

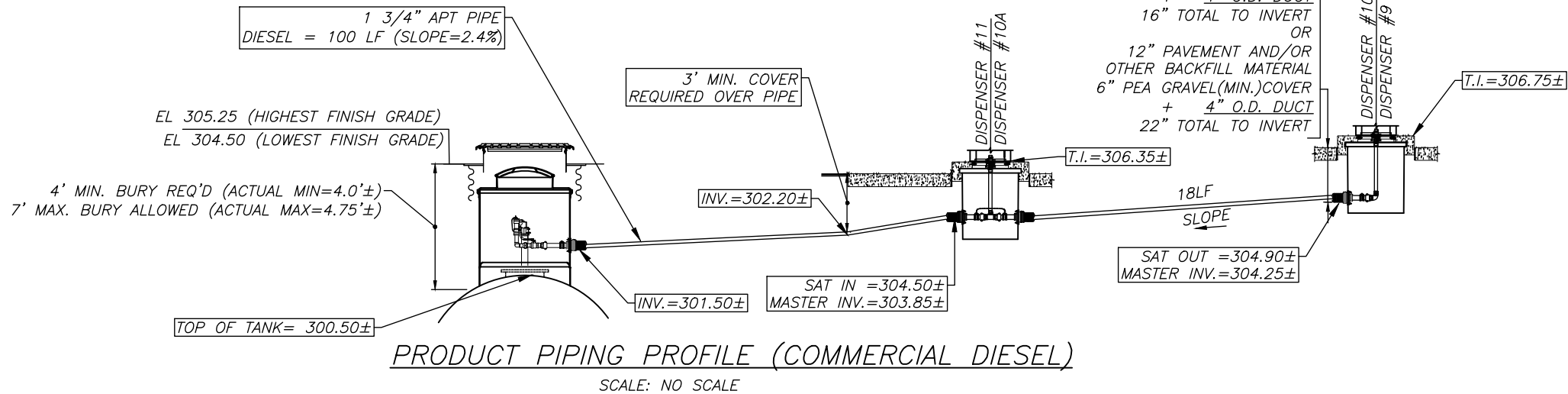
MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
DIESEL CANOPY PLAN AND ELEVATION

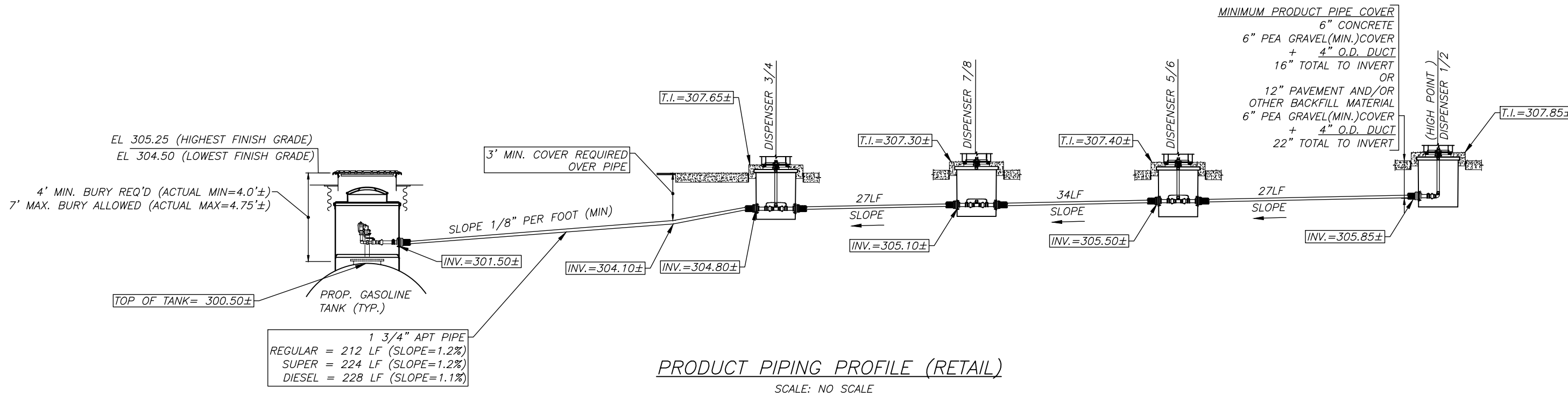
SHEET NUMBER: FS-15  
CONTRACT: 2024.11  
36 OF 48



VENT PIPING PROFILE (TYP.)  
 SCALE: NO SCALE



PRODUCT PIPING PROFILE (COMMERCIAL DIESEL)  
 SCALE: NO SCALE



PRODUCT PIPING PROFILE (RETAIL)  
 SCALE: NO SCALE

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By	Date	By	Date
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 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909

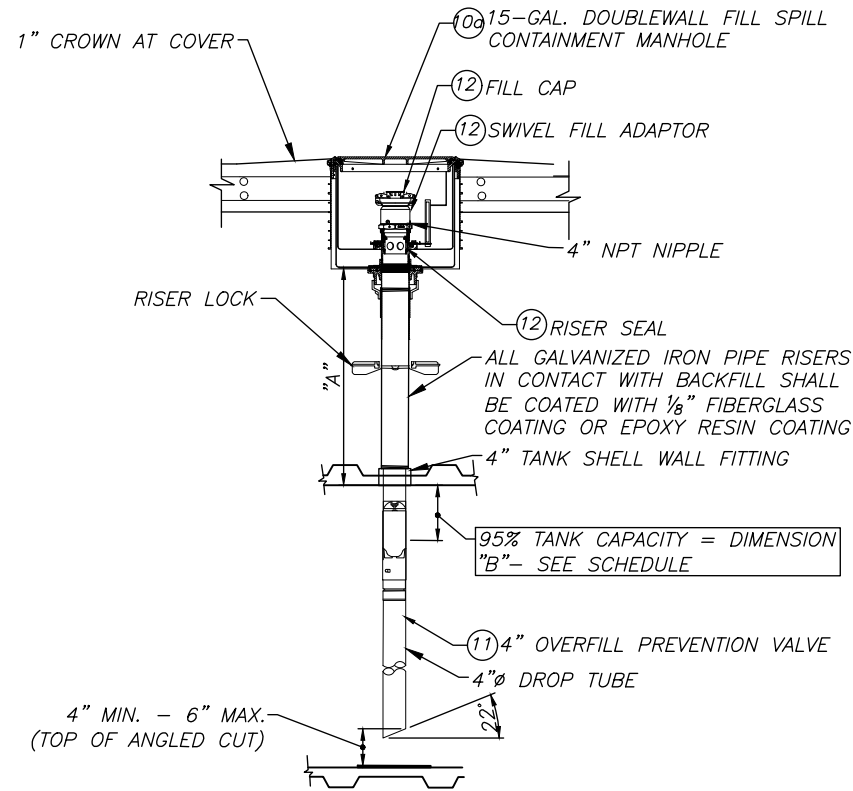
CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

**THE GOLD STAR  
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 PRODUCT PIPING PROFILE

SHEET NUMBER: FS-16  
 CONTRACT: 2024.11  
 37 OF 48

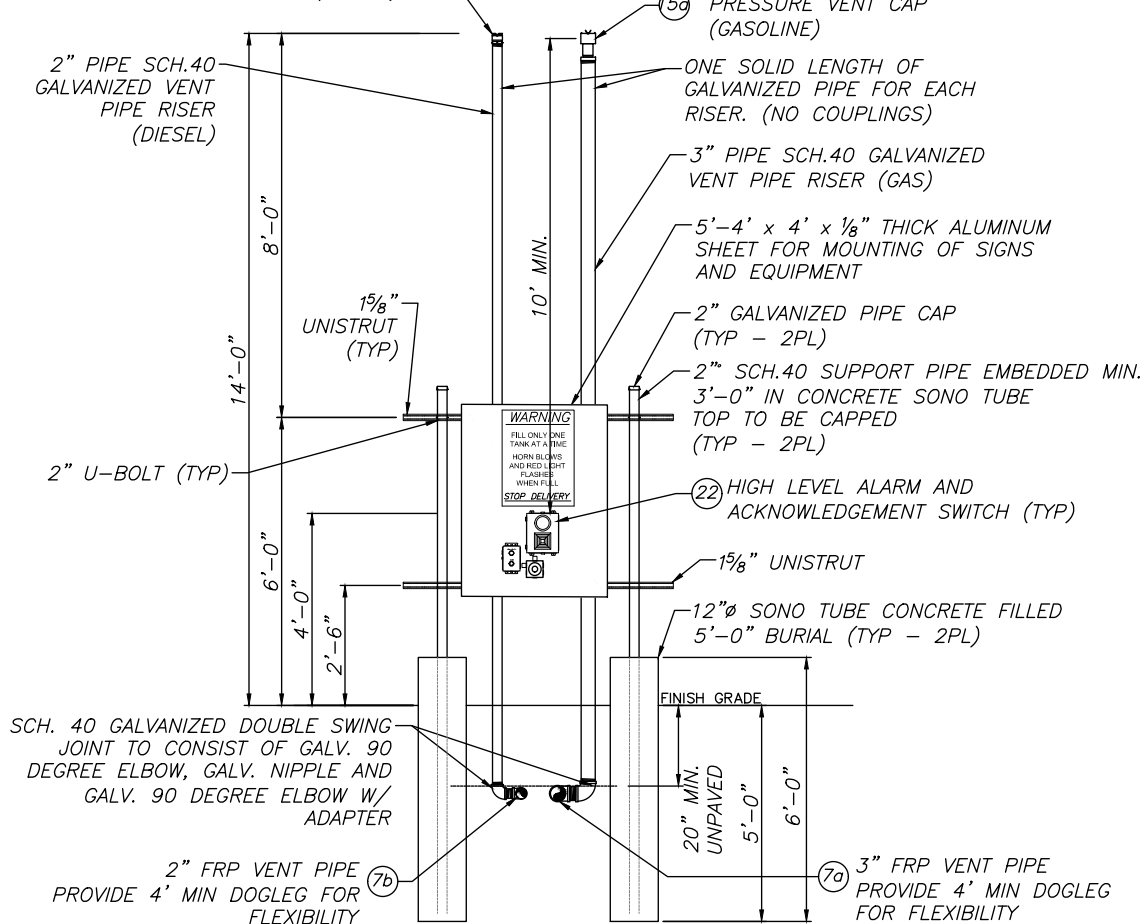
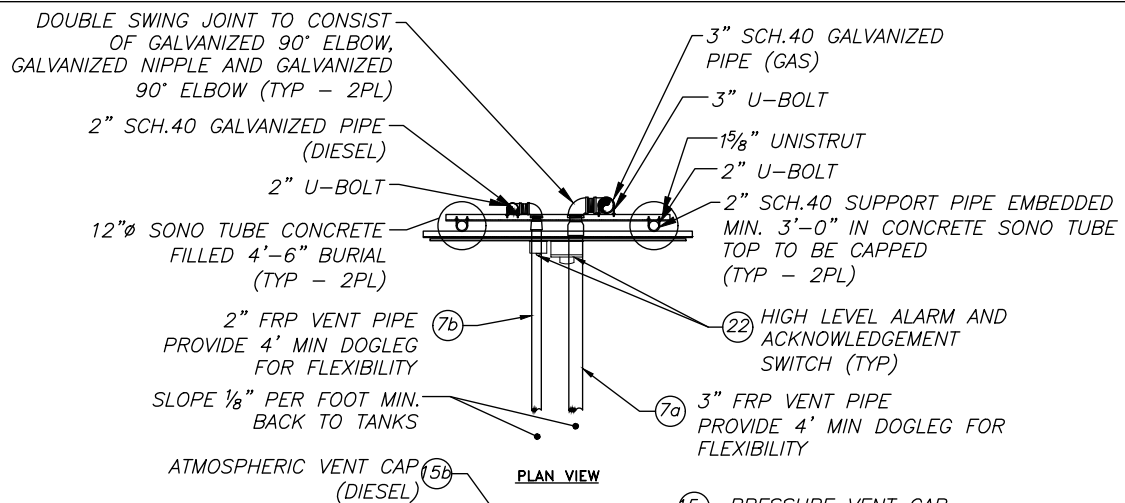


DIMENSION (B) = 95% TANK CAPACITY (RESTRICT FLOW) \*\*

TANK	ACTUAL VOLUME (GAL.)	95% (ACTUAL) VOLUME (GAL.)	DIM. A	DIM. B*	DIM. C
DOUBLE WALL FRP TANK 15,000 GAL. - REGULAR	14,545	.95 (14,545) = 13,817	FIELD VERIFIED	82 3/8"	TBD
DOUBLE WALL FRP TANK COMPARTMENT 10,000 GAL. DIESEL (BASE) -	9,696	.95 (9,696) = 9,211	FIELD VERIFIED	82 1/4"	TBD
DOUBLE WALL FRP TANK COMPARTMENT 5,000 GAL. DIESEL (END) -	4,971	.95 (4,971) = 4,722	FIELD VERIFIED	82 5/8"	TBD

NOTE: EXISTING TANKS WERE ASSUMED TO BE OWENS CORNING. THESE CALCULATIONS ARE BASED ON DATA FROM TANK CALIBRATION CHARTS OBTAINED FROM CONTAINMENT SOLUTIONS. GC IS RESPONSIBLE FOR FIELD VERIFYING ALL DIMENSIONS AND ENSURING THE OVERFILL PREVENTION VALVE IS INSTALLED PER ALL STATE AND MANUFACTURER'S REQUIREMENTS.  
 \* BELOW THE TANK TOP (I.D.).  
 DIM. B CORRESPONDS TO 95% ACTUAL TANK VOLUME (FROM TANK CALIBRATION CHART)  
 DIM. C = A + B (TO DETERMINE THE TOP TUBE CUT LENGTH)

**FILL SPILL BUCKET DETAIL**  
SCALE: 3/8" = 1'-0" (11"X17")



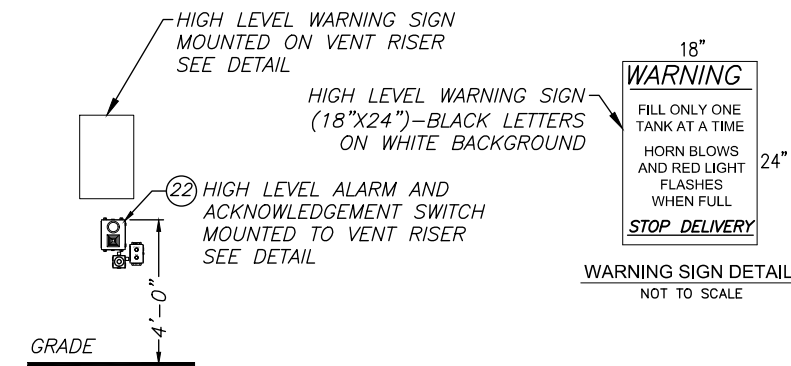
**NEW VENT CLUSTER**

- ALL SCH. 40 GALVANIZED STEEL PIPE IN CONTACT WITH BACKFILL SHALL BE COATED WITH 1/8" FIBERGLASS COATING OR 1/8" EPOXY RESIN BELOW FINISHED GRADE.
- ALL PIPE, SUPPORTS, AND HARDWARE TO BE GALVANIZED.
- DO NOT COAT GALVANIZED STEEL PIPE ABOVE FINISHED GRADE.

**THE VENT CAP/OUTLETS MUST MEET THE FOLLOWING MINIMUM SETBACKS:**

- 10' FROM OVERHEAD ELECTRICAL LINES,
- 5' FROM BUILDING OPENINGS (INCL. DOORS, UNSEALED WINDOWS, ETC.),
- 15' FROM POWERED VENTILATION AIR INTAKE DEVICES,
- 3' ABOVE ROOF LINE

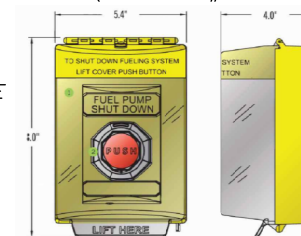
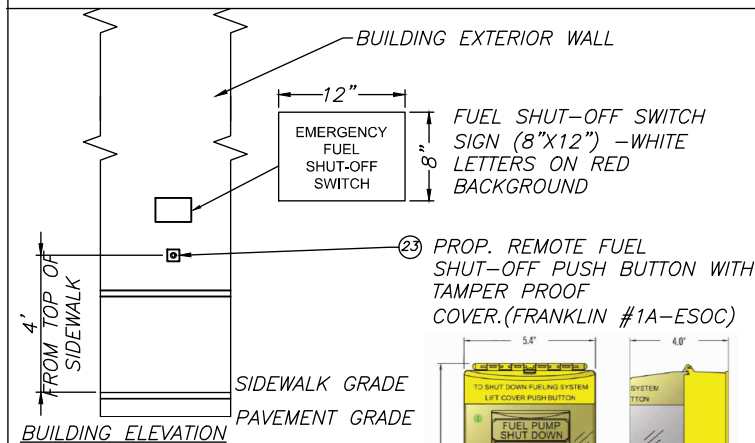
**VENT STACK DETAIL**  
SCALE: 1/4" = 1'-0" (11"X17")



TANK #	NOMINAL TANK SIZE (GAL)	ACTUAL VOLUME (GAL)	90% TANK CAPACITY (GAL)	HIGH LEVEL ALARM SETTING OFF BOTTOM OF FUEL TANK
13-1	15,000 REGULAR	14,545	13,090	76 7/8"
14-1	10,000 DIESEL	9,696	8,726	76 3/4"
14-2	5,000 SUPER	4,971	4,473	77 1/4"

NOTES:  
OVERFILL ALARM TO BE SET AT 90% TANK CAPACITY.

**HIGH LEVEL ALARM**  
SCALE: NOT TO SCALE



**EMERGENCY STOP**  
SCALE: NOT TO SCALE

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No.	Revision	By	Date

Designed by:							
By	Date	By	Date	By	Date	By	Date
Designed	DJP 4/24	Checked	HS 4/24				
Drawn	AK 4/24	In Charge of	FCM 4/24				

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82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909

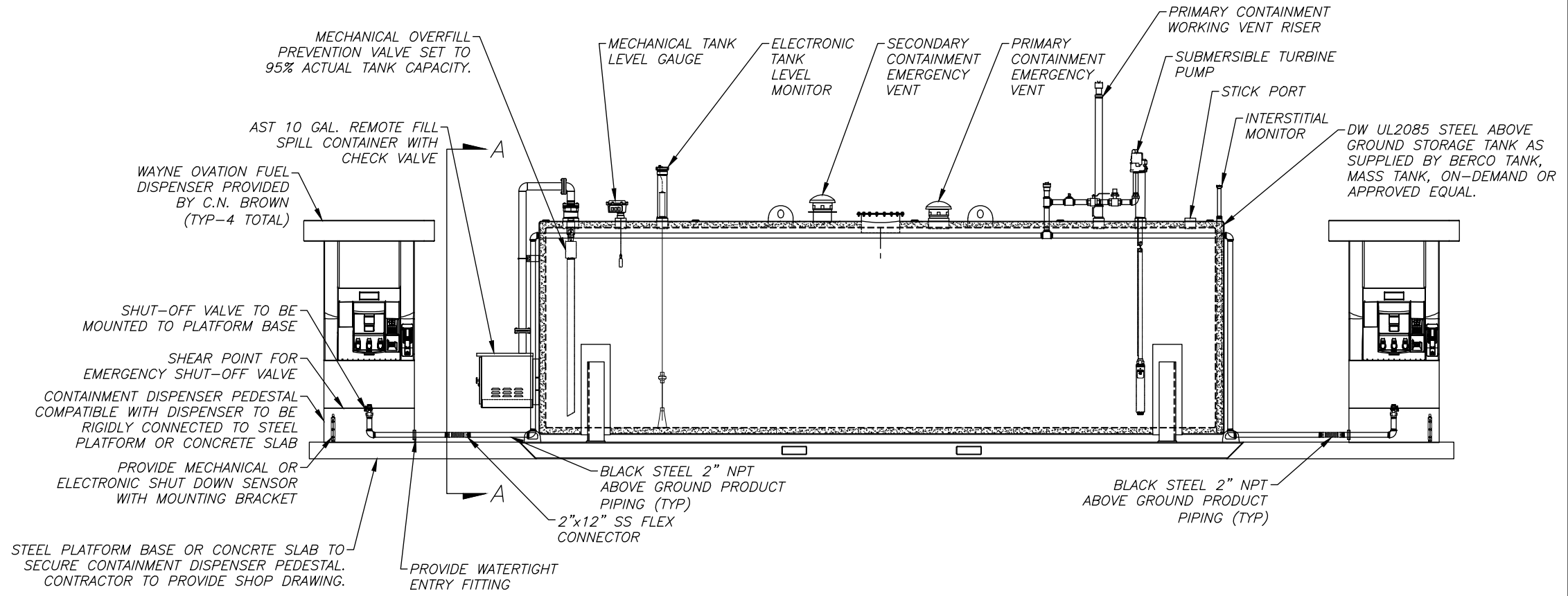
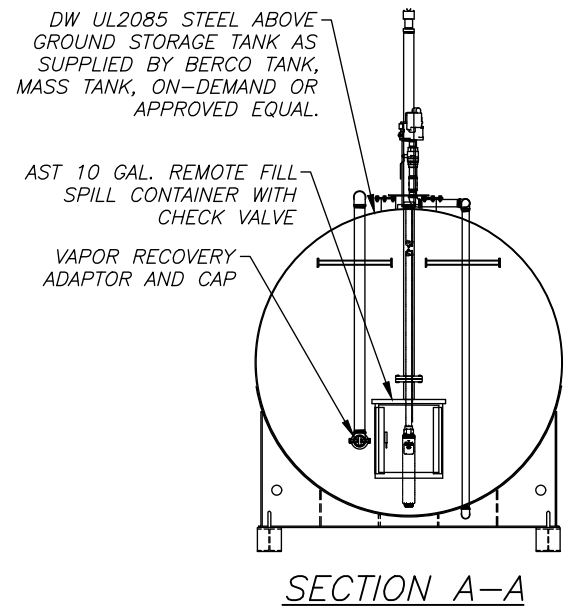
CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

**THE GOLD STAR MEMORIAL HIGHWAY**

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
FUEL SHUTOFF DETAILS

SHEET NUMBER: FS-17  
CONTRACT: 2024.11  
38 OF 48

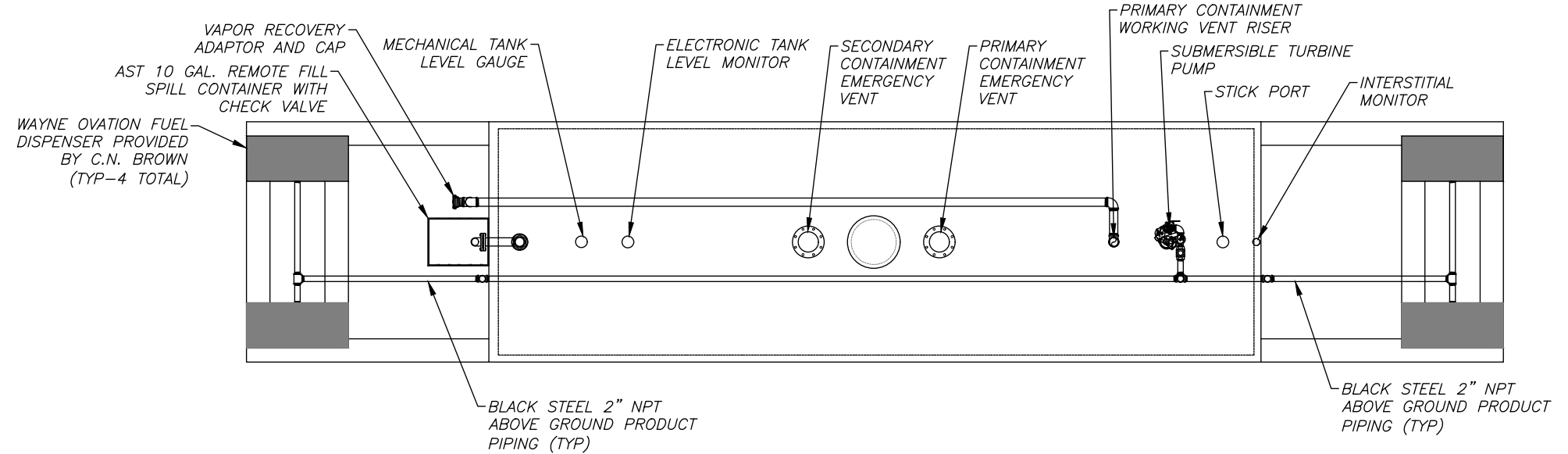
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10,000 GAL. GASOLINE AST - SIDE ELEVATION

**NOTES:**

- 1) THE CONTRACTOR SHALL COORDINATE RENTAL OF TEMPORARY AST WITH BERCO TANK, ON-DEMAND FUEL TANK RENTAL, OR APPROVED EQUAL.
- 2) THE CONTRACTOR SHALL DESIGN, FURNISH, ASSEMBLE AND INSTALL TEMPORARY FUELING SYSTEMS FOR REGULAR GASOLINE AND DIESEL FUELING, INCLUDING UL2085 DW STEEL TANKS WITH TANK TOP EQUIPMENT, DISPENSER CONTAINMENT PEDESTALS, AND MOUNTING HARDWARE AS REQUIRED TO RIGIDLY MOUNT DISPENSERS. IN ACCORDANCE WITH NFPA 30 AND 30A AND SECTION 802 OF THE TECHNICAL SPECIFICATIONS.
- 3) PURSUANT TO 38 MRSA 570-K, A SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN PREPARED IN ACCORDANCE WITH THE CODE OF FEDERAL REGULATIONS 40 CFR PART 112 BY A MAINE P.E. SHALL BE IMPLEMENTED FOR THE TEMPORARY AST FUEL SYSTEMS. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING THE SPCC PLAN AND FOR COORDINATING THIS EFFORT WITH THE MTA AS REQUIRED.
- 4) C.N. BROWN TO FURNISH DISPENSERS. CONTRACTOR SHALL COORDINATE MONITORING AND POINT OF SALE EQUIPMENT WITH C.N. BROWN.
- 5) THE CONTRACTOR SHALL PROVIDE MANUFACTURER'S SPECIFICATIONS AND SHOP DRAWINGS FOR OWNER'S APPROVAL.
- 6) PROVIDE WIRING DIAGRAM FOR PUMPS, DISPENSERS, CONTROLS, AND SENSORS; INCLUDING LOCATIONS OF CONNECTIONS FOR POWER AND COMMUNICATION FOR CONTRACTORS TO FIELD INSTALL.



10,000 GAL. GASOLINE AST - PLAN VIEW

**10,000 GAL. DIESEL TEMPORARY FUELING DETAIL**  
SCALE: 3/16" = 1'-0" (11"X17")

Scale:		Designed by:	
No.	Revision	By	Date

Designed by: **GPI** Engineering Design Planning Construction Management  
603.893.0720 GPINET.COM  
Greenman-Pedersen, Inc.  
44 Stiles Road, Suite One  
Salem, NH 03079

By	Date	By	Date
Designed	DJP 4/24	Checked	HS 4/24
Drawn	AK 4/24	In Charge of	FCM 4/24

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

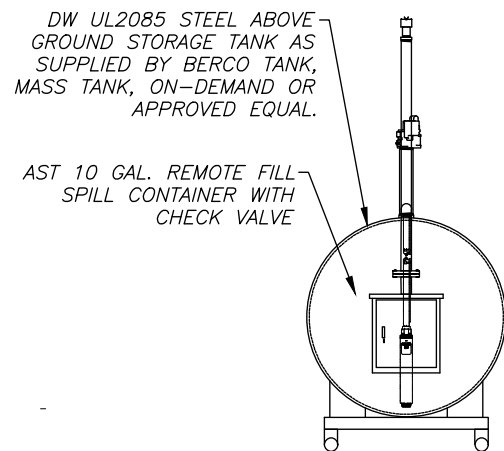
**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

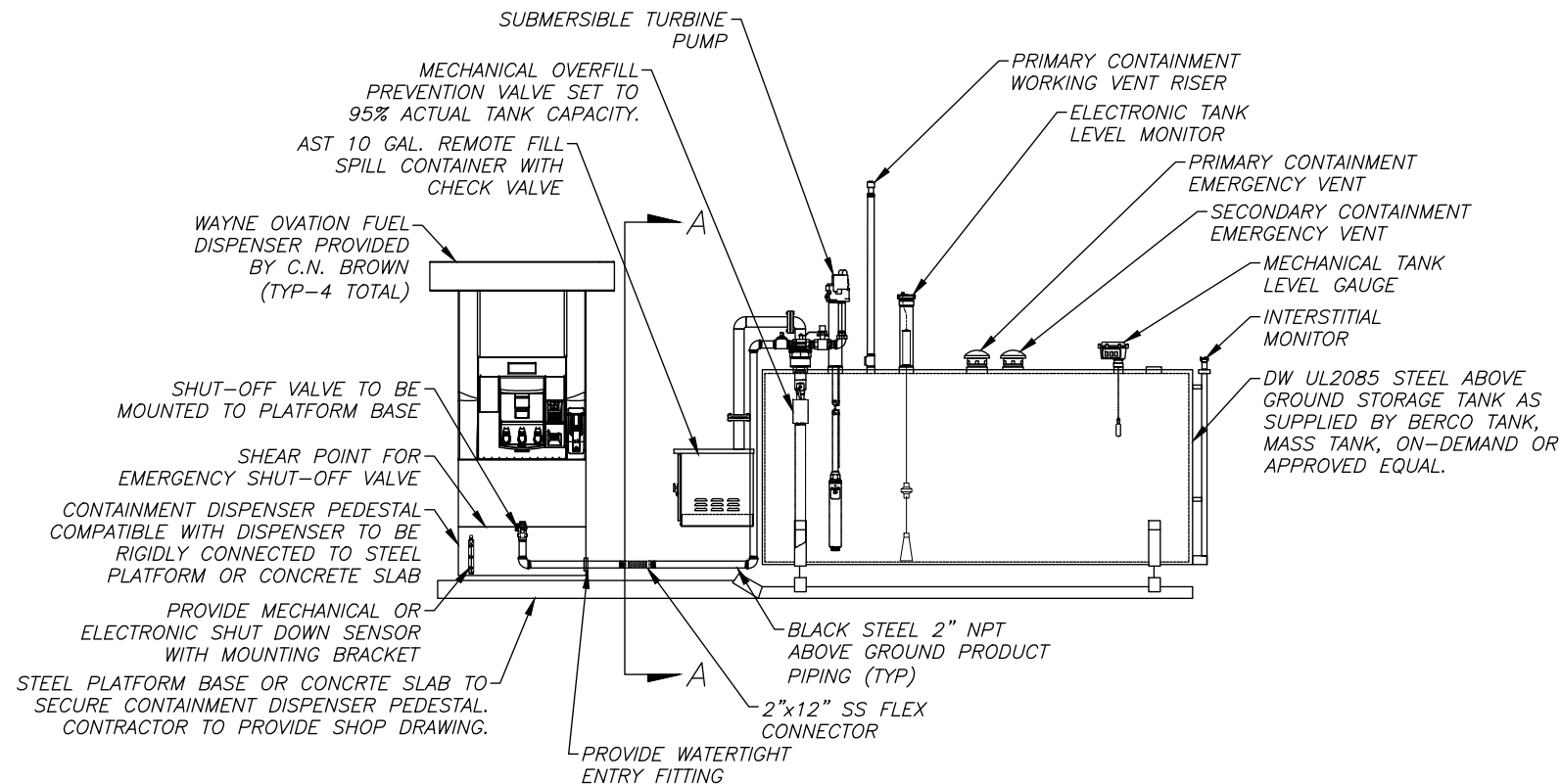
MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
TYPICAL TEMPORARY FUELING  
DETAIL (GASOLINE)

SHEET NUMBER: FS-18  
CONTRACT: 2024.11  
39 OF 48



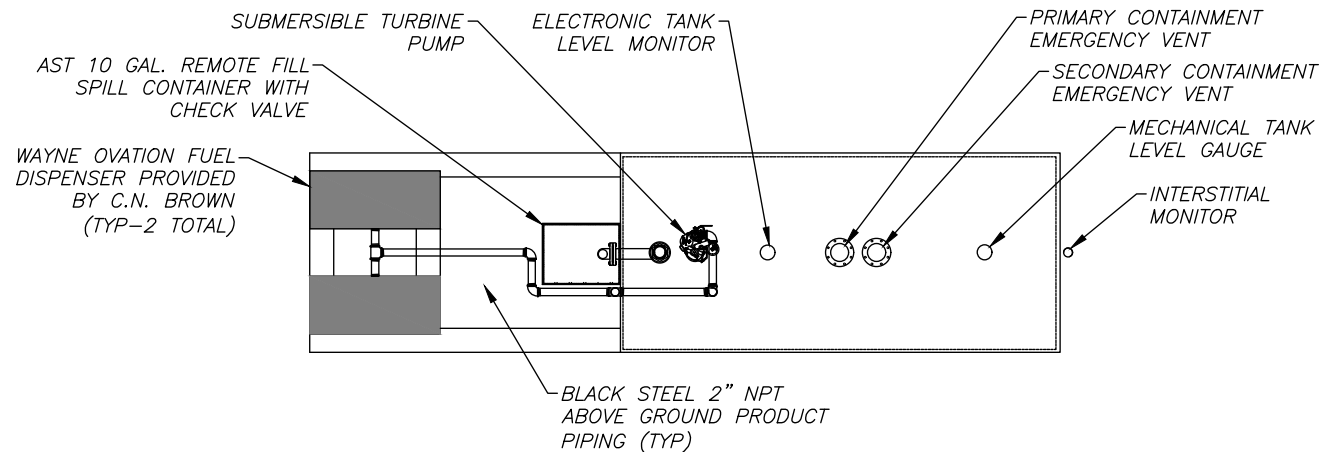
SECTION A-A



2,000 GAL. DIESEL AST - SIDE ELEVATION

NOTES:

- 1) THE CONTRACTOR SHALL COORDINATE RENTAL OF TEMPORARY AST WITH BERCO TANK, ON-DEMAND FUEL TANK RENTAL, OR APPROVED EQUAL.
- 2) THE CONTRACTOR SHALL DESIGN, FURNISH, ASSEMBLE AND INSTALL TEMPORARY FUELING SYSTEMS FOR REGULAR GASOLINE AND DIESEL FUELING, INCLUDING UL2085 DW STEEL TANKS WITH TANK TOP EQUIPMENT, DISPENSER CONTAINMENT PEDESTALS, AND MOUNTING HARDWARE AS REQUIRED TO RIGIDLY MOUNT DISPENSERS. IN ACCORDANCE WITH NFPA 30 AND 30A AND SECTION 802 OF THE TECHNICAL SPECIFICATIONS.
- 3) PURSUANT TO 38 MRSA 570-K, A SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN PREPARED IN ACCORDANCE WITH THE CODE OF FEDERAL REGULATIONS 40 CFR PART 112 BY A MAINE P.E. SHALL BE IMPLEMENTED FOR THE TEMPORARY AST FUEL SYSTEMS. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING THE SPCC PLAN AND FOR COORDINATING THIS EFFORT WITH THE MTA AS REQUIRED.
- 4) C.N. BROWN TO FURNISH DISPENSERS. CONTRACTOR SHALL COORDINATE MONITORING AND POINT OF SALE EQUIPMENT WITH C.N. BROWN.
- 5) THE CONTRACTOR SHALL PROVIDE MANUFACTURER'S SPECIFICATIONS AND SHOP DRAWINGS FOR OWNER'S APPROVAL.
- 6) PROVIDE WIRING DIAGRAM FOR PUMPS, DISPENSERS, CONTROLS, AND SENSORS; INCLUDING LOCATIONS OF CONNECTIONS FOR POWER AND COMMUNICATION FOR CONTRACTORS TO FIELD INSTALL.



2,000 GAL. DIESEL AST - PLAN VIEW

2,000 GAL. DIESEL TEMPORARY FUELING DETAIL

SCALE: 3/16" = 1'-0" (11"X17")

Scale:		Designed by:	
No.	Revision	By	Date

By	Date	By	Date
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HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

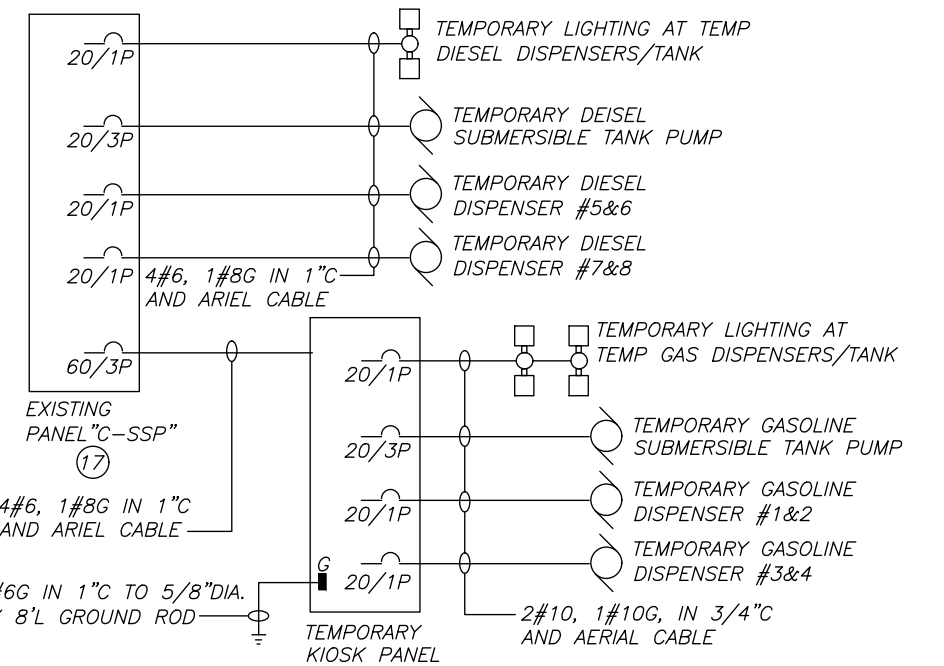
CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
TYPICAL TEMPORARY FUELING  
DETAIL (DIESEL)

SHEET NUMBER: FS-19  
CONTRACT: 2024.11  
40 OF 48



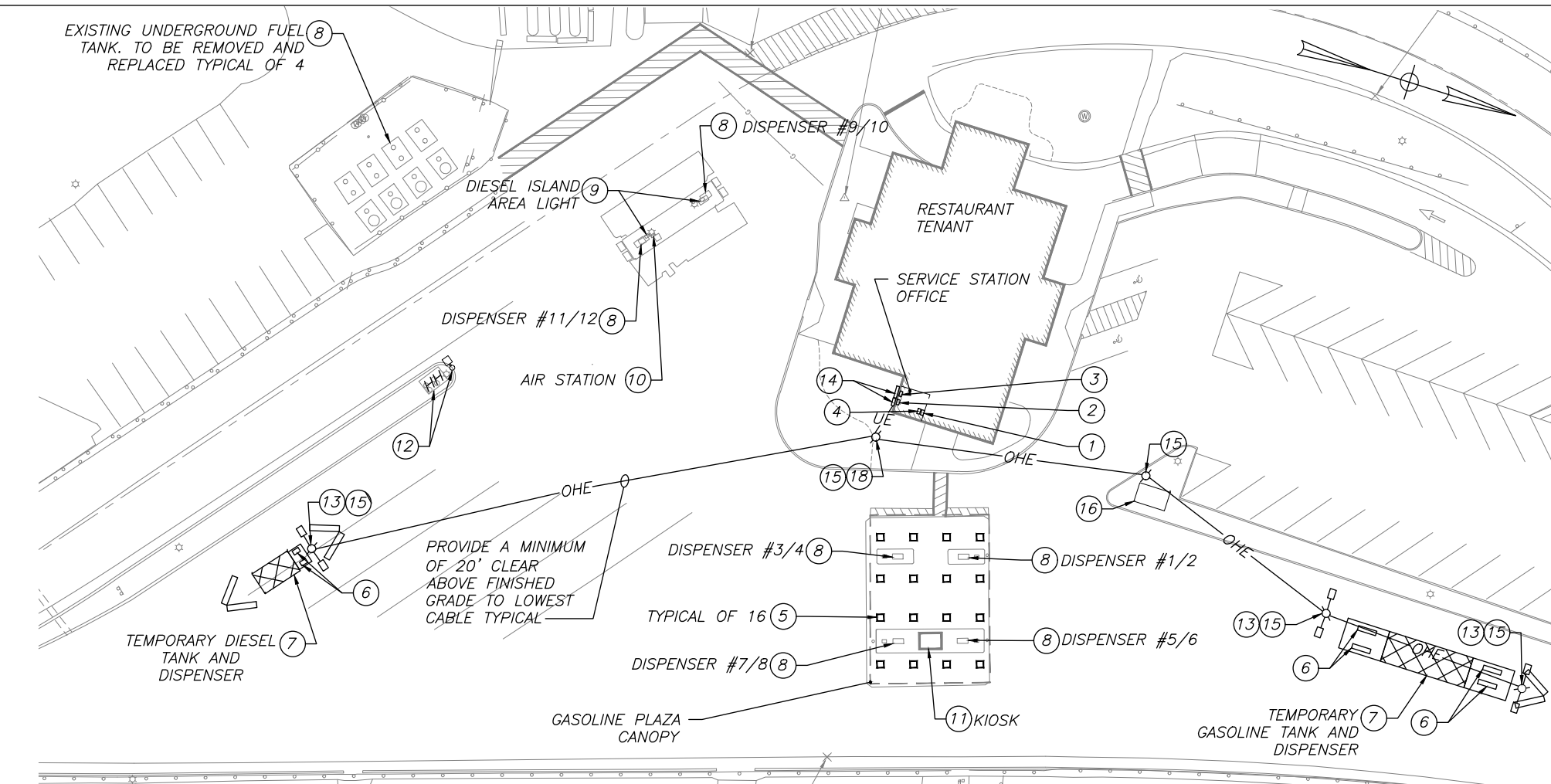
**GENERAL ELECTRICAL NOTES:**

1. GENERAL NOTES ON DRAWING FS-E3 APPLY TO THIS DRAWING.
2. AT COMPLETION OF INSTALLATION OF NEW FUELING SYSTEMS, COMPLETELY REMOVE ALL TEMPORARY ELECTRICAL EQUIPMENT, AND SERVICES. RESTORE ALL EXISTING SURFACES TO ORIGINAL CONDITION.



TEMPORARY ELECTRICAL ONE-LINE DIAGRAM

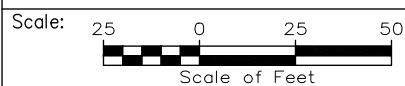
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**KEY NOTES:**

1. EXISTING ELECTRICAL PANEL "C-SSP" TO REMAIN.
2. EXISTING VEEDER-ROOT #TLS-450PLUS PANEL TO REMAIN. CONTRACTOR SHALL REPLACE AND/OR UPGRADE FUEL TANK MONITORING SOFTWARE OR HARDWARE AS REQUIRED.
3. EXISTING FIRE SUPPRESSION PANEL. CONTRACTOR SHALL REPLACE AND UPGRADE WITH NEW PANEL.
4. REMOVE EMERGENCY STOP RELAYS AND ASSOCIATED ENCLOSURE.
5. CONTRACTOR SHALL REMOVE AND REPLACE CANOPY LIGHT FIXTURES WITH LED FIXTURE SIMILAR TO LSI #SCV-LED-13L-SC-UNV-DIM-40K-WHT-IMSBT1L-673425R2. FIXTURES TO HAVE INTEGRAL BLUETOOTH MOTION AND PHOTO SENSOR TO PROVIDE DUSK TO DAWN OPERATION WITH AUTOMATIC DIMMING UPON NO MOTION.
6. FEED TEMPORARY DISPENSERS FROM EXISTING PANEL "C-SSP" AND PROVIDE TEMPORARY EMERGENCY FUEL SHUT OFF SYSTEM.
7. TEMPORARY FUELING FACILITIES, CONTRACTOR TO PROVIDE ALL POWER, COMMUNICATIONS, ALARM AND POINT OF SALE WIRING TO SERVE TEMPORARY FUELING EQUIPMENT.
8. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL (POWER & COMMUNICATIONS) SERVICES (CONDUIT AND WIRE) FROM FUEL DISPENSER BACK TO SERVICE STATION OFFICE.
9. CONTRACTOR SHALL DISCONNECT AND REMOVE ALL BRANCH CIRCUIT CONDUIT AND WIRING FROM DIESEL ISLAND AREA LIGHTS BACK TO PANEL "C-SSP". REMOVE LIGHTING POLE AND FIXTURE AND PROPERLY DISPOSE OF.
10. DISCONNECT, REMOVE AND RETAIN ON SITE AIR STATION (INCLUDING CONCRETE BLOCK FOUNDATION) REMOVE POWER CONNECTION BACK TO DIESEL ISLAND POLE LIGHT.
11. CONTRACTOR SHALL REMOVE ALL ELECTRICAL SERVICES FROM KIOSK BACK TO PANEL "C-SSP" IN SERVICE STATION OFFICE. PROVIDE 17"W X 30"L X 30"D TIER 22 RATED, FLUSH ISLAND MOUNTED HANDHOLE. CUT BACK CONDUITS TO HANDHOLE AND CAP.
12. DISCONNECT REMOVE AND RETURN TO OWNER POLE FIXTURE AND POLE. MODIFY EXISTING CONDUITS AND WIRING TO ALLOW FOR DOWN STREAM POLE FIXTURES TO REMAIN IN OPERATION.
13. CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING, REFER TO SPECIAL PROVISION 634.23 FOR ADDITIONAL INFORMATION.
14. EXISTING 4'L X 6" SQ NEMA 3R WIREWAYS TO REMAIN.
15. CONTRACTOR SHALL PROVIDE CLASS 3 30' WOOD POLE WITH ALL REQUIRED MOUNTING HARDWARE TO SUPPORT POWER, COMMUNICATIONS, ALARM AND POINT OF SALE WIRING FOR TEMPORARY FUELING EQUIPMENT. PROVIDE A MINIMUM OF 30" SEPARATION BETWEEN LINE VOLTAGE CABLING (208V) AND LOW VOLTAGE CABLING.
16. TEMPORARY KIOSK, APPROXIMATE LOCATION. PROVIDE 60A, 208V, 3PH CIRCUIT FROM PANEL "C-SSP" TO SERVE KIOSK. COORDINATE ELECTRICAL ROUGH-IN REQUIREMENTS WITH CONTRACTOR PROVIDING KIOSK.
17. UTILIZE EXISTING BRANCH BREAKERS WITHIN PANELBOARD "C-SSP" TO SERVE TEMPORARY FUELING TANK PUMPS, FUEL DISPENSERS, KIOSK AND TEMPORARY POLE LIGHTING.
18. ROUTE ALL BRANCH CIRCUIT WIRING FOR TEMPORARY FUELING AND LIGHTING EQUIPMENT UNDERGROUND TO POLE #1, ROUTE UP POLE IN CODE SIZED RGS CONDUITS TO 23' AFF AND TERMINATE IN A WEATHERHEAD.

F:\Projects\NEX-2300348 - Cumberland, ME - MTA - HNTB\UST\2300348\_TPE1.dwg FS-E1 DEMO 4/15/24 2:42pm dplerog



Designed by:



HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909



**THE GOLD STAR  
MEMORIAL HIGHWAY**

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
SITE PLAN - ELECTRICAL REMOVALS  
AND TEMPORARY ELECTRICAL

No.	Revision	By	Date

	By	Date		By	Date
Designed	DJP	4/24	Checked	HS	4/24
Drawn	AK	4/24	In Charge of	FCM	4/24

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CONTRACT: 2024.11

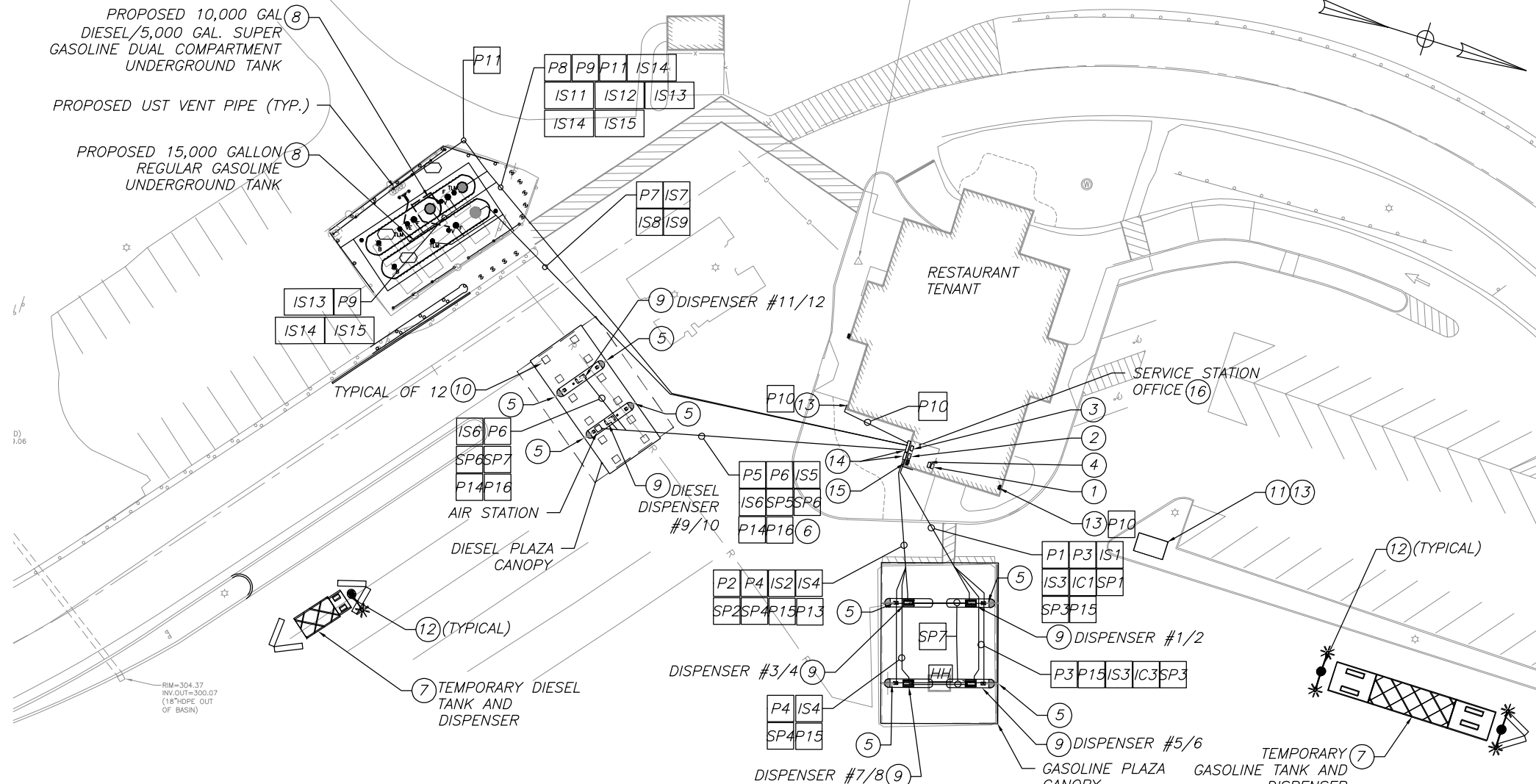
SHEET NUMBER: FS-E1

41 OF 48



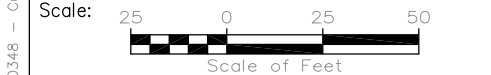
**GENERAL ELECTRICAL NOTES:**

1. ALL ELECTRICAL WORK SHALL BE PROVIDED IN FULL CONFORMANCE WITH NFPA 70 (NATIONAL ELECTRIC CODE) 2018.
2. ELECTRICAL WORK WITHIN AREAS OF FUEL DISPENSING SHALL BE PROVIDED IN CONFORMANCE WITH NFPA 70 CHAPTER 514 AND NFPA 30A 2008
  - A. PROVIDE UL LISTED HAZARDOUS LOCATION CONDUIT SEALS AS REQUIRED AT EACH CONDUIT RUN ENTERING OR LEAVING A FUEL DISPENSER. THE SEAL FITTING SHALL BE THE FIRST FITTING AFTER THE CONDUIT EMERGES FROM THE EARTH OR CONCRETE.
  - B. PROVIDE UL LISTED HAZARDOUS LOCATION CONDUIT SEALS AS REQUIRED AT EACH CONDUIT RUN NEAR THE BUILDING. THE SEAL FITTING SHALL BE THE FIRST FITTING AFTER THE CONDUIT EMERGES FROM THE EARTH OR CONCRETE.
3. ALL CABLE(S) (POWER AND COMMUNICATION) SHALL BE INSTALLED IN NEW CONDUIT(S), MINIMUM SIZE CONDUIT IS 1".
4. ALL EXTERIOR CONDUITS ABOVE GRADE SHALL BE RIGID GALVANIZED STEEL WITH STEEL FITTINGS. CONDUITS BELOW GRADE OUTSIDE OF HAZARDOUS AREAS MAY BE PVC SCHEDULE 80 UNDER PAVEMENT.
5. PROVIDE 6" SEPARATION BETWEEN CONDUIT(S) OF LIKE SYSTEMS, POWER, AND COMMUNICATION CONDUIT(S).
6. PROVIDE 6" OF SAND COVER AND WARNING TAPE OVER CONDUIT PER TD-01. IF CONDUITS FORM A DUCTBANK WIDER THAN 12" PROVIDE MULTIPLE WARNING TAPE OVER DUCTBANK RUN SUCH THAT EACH WARNING TAPE IS SEPARATED BY MAXIMUM OF 12".
7. ALL CABLES (POWER AND COMMUNICATION) SHALL BE NEW, CONTINUOUS FROM SOURCE TO TERMINATION POINT WITHOUT SPLICES. CABLES SHALL BE RATED FOR OUTSIDE WET ENVIRONMENTS, AND WHERE APPLICABLE HAZARDOUS LOCATIONS.
8. SEE DRAWING FS-E2 FOR APPROXIMATE EXISTING CONDUIT RUN LOCATIONS ASSOCIATED WITH FUELING AT PROJECT SITE. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL INFORMATION AND PERFORMING A UTILITY SURVEY TO INVESTIGATE FOR UNKNOWN UTILITIES.
9. REFER TO FUEL SYSTEMS CIRCUIT SCHEDULE FOR ADDITIONAL INFORMATION.



**KEY NOTES:**

- (1) EXISTING ELECTRICAL PANEL "C-SSP" TO REMAIN.
- (2) EXISTING VEEDER-ROOT #TLS-450PLUS PANEL TO REMAIN. CONTRACTOR SHALL REPLACE AND/OR UPGRADE FUEL TANK MONITORING SOFTWARE OR HARDWARE AS REQUIRED.
- (3) EXISTING FIRE SUPPRESSION PANEL. CONTRACTOR SHALL REPLACE AND UPGRADE WITH NEW PANEL THAT IS SUITABLE TO SUPPORT THE GASOLINE AND DIESEL CANOPY FIRE PROTECTION SYSTEMS.
- (4) REMOVE EMERGENCY STOP RELAYS AND ASSOCIATED ENCLOSURES.
- (5) CONTRACTOR SHALL PROVIDE GUTTER AND DOWN SPOUT DE-ICING SYSTEM CONSISTING OF SELF REGULATING HEATING CABLE RATED 5W/LF, 120V. PROVIDE WITH AERIAL SNOW SENSOR GUTTER DE-ICING CONTROLLER, ROOF DRAIN DE-ICING FITTINGS AND ALL TERMINATION FITTINGS.
- (6) PROVIDE TWO (2) NEW CONDUITS BACK TO SERVICE STATION OFFICE FOR FUTURE CAMERA(S).
- (7) FEED TEMPORARY DISPENSERS FROM EXISTING PANEL "C-SSP" AND PROVIDE TEMPORARY EMERGENCY FUEL SHUT OFF SYSTEM.
- (8) CONTRACTOR SHALL PROVIDE NEW PUMPS AND UPGRADE EXISTING MONITORING SYSTEM FOR NEW FUEL STORAGE TANKS. SEE MECHANICAL DRAWINGS FOR QUANTITY AND SIZE.
- (9) CONTRACTOR SHALL PROVIDE ALL ELECTRICAL (POWER & COMMUNICATIONS) SERVICES (CONDUIT AND WIRE) FROM FUEL DISPENSER BACK TO SERVICE STATION OFFICE, ROUTE CIRCUITS THROUGH EXISTING WIREWAYS.
- (10) CONTRACTOR SHALL PROVIDE CANOPY LED LIGHT FIXTURES SIMILAR TO LSI #SCV-LED-13L-SC-UNV-DIM-40K-WHT-IMSBT1L. FIXTURES TO HAVE INTEGRAL BLUETOOTH MOTION AND PHOTO SENSOR TO PROVIDE DUSK TO DAWN OPERATION WITH AUTOMATIC DIMMING UPON NO MOTION.
- (11) AT COMPLETION OF PROJECT CONTRACTOR SHALL DISCONNECT AND REMOVE ALL ELECTRICAL (POWER & COMMUNICATIONS) SERVICES (CONDUIT AND WIRE) FROM TEMPORARY KIOSK, TEMPORARY FUEL TANKS AND DISPENSERS BACK TO SERVICE STATION OFFICE PANEL "C-SSP" AND COMMUNICATIONS ENCLOSURE.
- (12) CONTRACTOR SHALL PROVIDE FULL CUTOFF LED TEMPORARY LIGHTING AS REQUIRED TO PROVIDE A AVERAGE OF 10FC, A MAXIMUM AVE./MIN. RATIO OF 10:1 AT TEMPORARY FUEL DISPENSERS EXTENDING TO 20' FROM DISPENSERS IN ALL DIRECTIONS, TEMPORARY LIGHTING FEED FROM EXISTING PANEL "C-SSP".
- (13) CONTRACTOR SHALL PROVIDE EMERGENCY FUEL SHUT OFF SYSTEM IN ACCORDANCE WITH NFPA 70 CHAPTER 514 AND NFPA 30A.
- (14) TEMPORARY KIOSK, APPROXIMATE LOCATION.
- (15) EXISTING 4'L X 6"SQ. NEMA 3R WIREWAYS TO REMAIN.
- (16) CONTRACTOR SHALL PROVIDE FUEL EQUIPMENT PANEL "FEP" COORDINATE EXACT LOCATION IN THE FIELD.



No.	Revision	By	Date

Designed by:

By	Date
Designed	DJP 4/24
Checked	HS 4/24
By	Date
Drawn	AK 4/24
In Charge of	FCM 4/24

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909

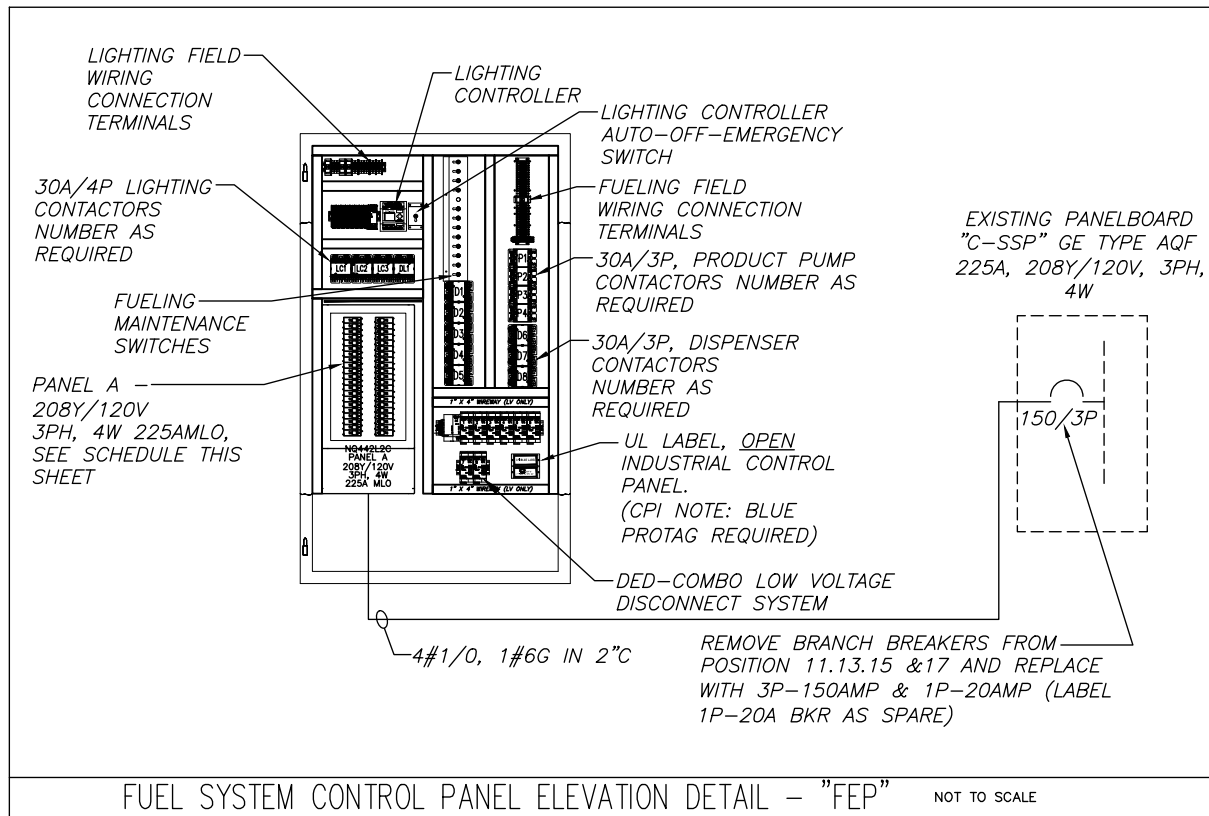
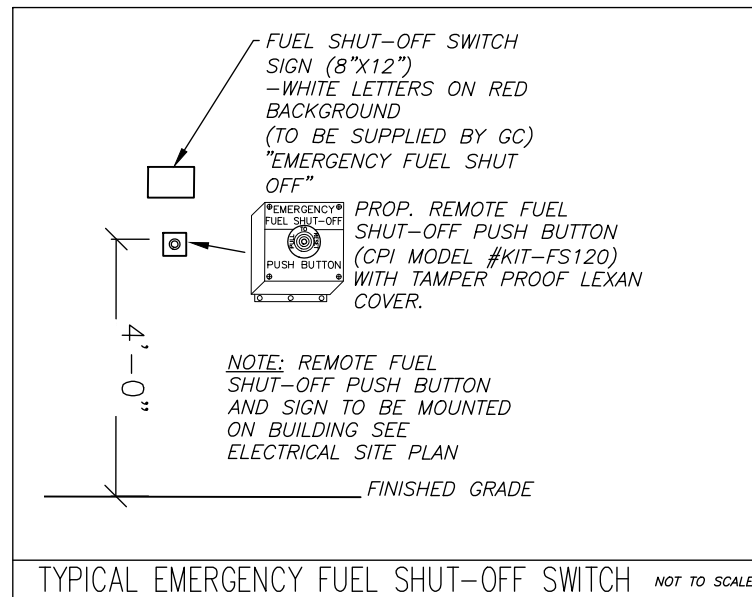
CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.



**THE GOLD STAR  
 MEMORIAL HIGHWAY**

CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 SITE PLAN - ELECTRICAL

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PANEL: **A** LOCATION: OFFICE VOLTS, PHASE, WIRE: 120/208V, 3Ø, 4W  
MOUNTING: SURFACE MAINS: 100A LO  
NOTES: SHORT CIRCUIT RATING: 10 KAIC

CKT #	LOAD DESCRIPTION	CONN LOAD KVA	WIRE SIZE	CB AMPS/POLE	PHASE Ø	CB AMPS/POLE	WIRE SIZE	CONN LOAD KVA	LOAD DESCRIPTION	CKT #
1	GAS DISPENSER #1 W/ SWITCHED NEUTRAL	0.96	10	20/1	A	20/1	10	0.96	GAS DISPENSER #2 W/ SWITCHED NEUTRAL	2
3	GAS DISPENSER #3 W/ SWITCHED NEUTRAL	0.96	10	20/1	B	20/1	10	0.96	GAS DISPENSER #4 W/ SWITCHED NEUTRAL	4
5	GAS DISPENSER #5 W/ SWITCHED NEUTRAL	0.96	10	20/1	C	20/1	10	0.96	GAS DISPENSER #6 W/ SWITCHED NEUTRAL	6
7	GAS DISPENSER #7 W/ SWITCHED NEUTRAL	0.96	10	20/1	A	20/1	10	1.2	GAS DISPENSER #8 W/ SWITCHED NEUTRAL	8
9	DIESEL DISPENSER #9 W/ SWITCHED NEUTRAL	0.96	10	20/1	B	20/1	10	1.2	DIESEL DISPENSER #10 W/ SWITCHED NEUTRAL	10
11	DIESEL DISPENSER #11 W/ SWITCHED NEUTRAL	0.96	10	20/1	C	20/1	10	1.2	DIESEL DISPENSER #12 W/ SWITCHED NEUTRAL	12
13	GASOLINE TANK SUBMERSIBLE PUMP		10	20/3	A	20/3	10		SUPER GASOLINE TANK SUBMERSIBLE PUMP	14
15			10		B		10	-		16
17			10		C		10	-		18
19	DIESEL TANK SUBMERSIBLE PUMP		10	20/3	A	20/1	-	-	GASOLINE CANOPY LIGHTING	20
21			10		B	20/1	-	-	DIESEL CANOPY LIGHTING	22
23			10		C	20/1	-	-	E-STOPS	24
25	GASOLINE CANOPY SIGN		10	20/1	A	20/1			DIESEL CANOPY SIGN	26
27	DIESEL ISLAND AIR STATION		10	20/1	B	20/1			GAS CANOPY ROOF DRAIN & DN SP DE-ICING	28
29					C	20/1			DIESEL CANOPY ROOF DRAIN & DN SP DE-ICING	30
31					A					32
33					B					34
35					C					36
37					A					38
39					B					40
41					C					42

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Scale:

No.	Revision	By	Date

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		By	Date	By	Date
		Designed	DJP 4/24	Checked	HS 4/24
Drawn	AK 4/24	In Charge of	FCM 4/24		

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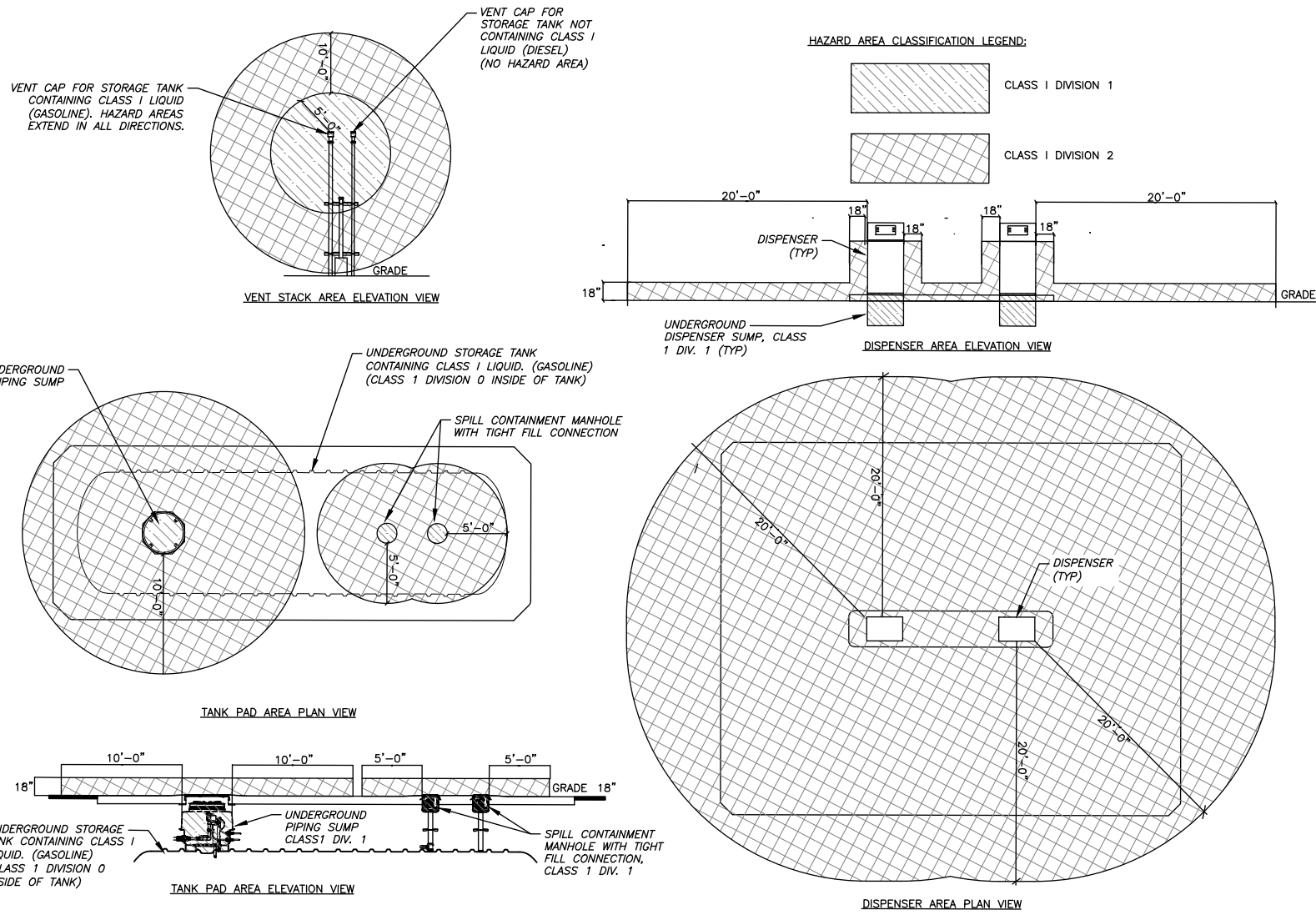
CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

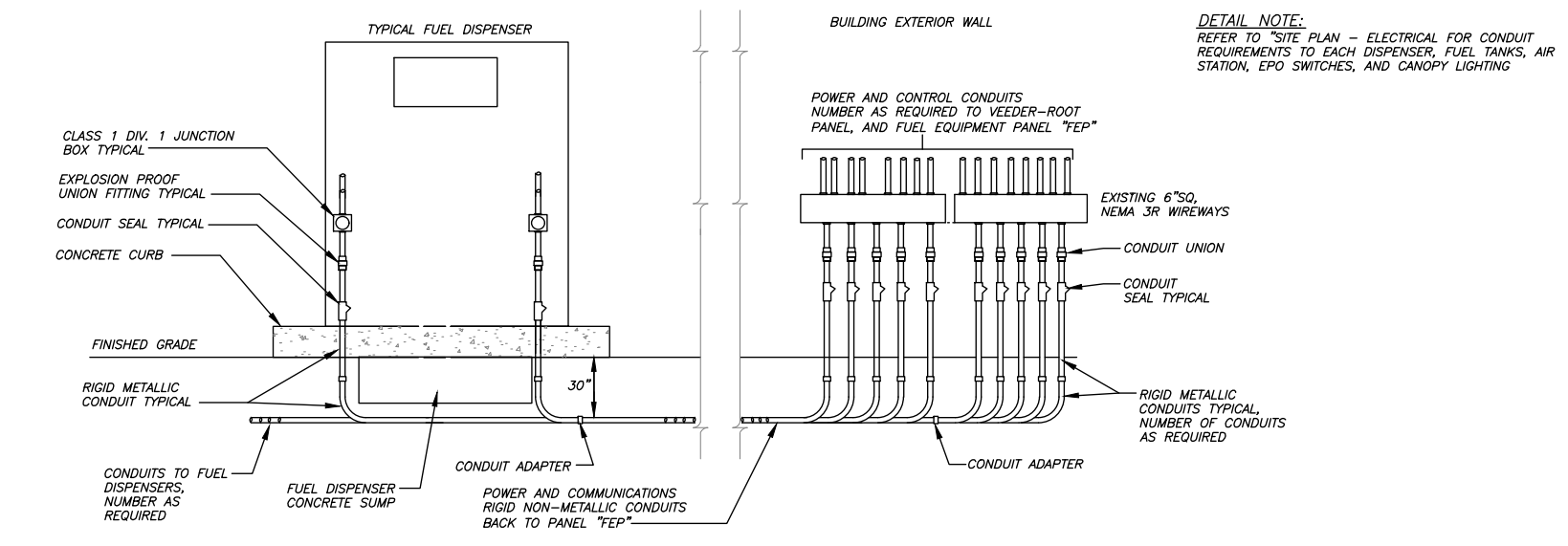
CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
ELECTRICAL DETAILS & SCHEDULES

SHEET NUMBER: FS-E4  
CONTRACT: 2024.11  
44 OF 48



**HAZARD AREA CLASSIFICATION DETAILS**

NOT TO SCALE



FUEL SYSTEMS CIRCUIT SCHEDULE					
TAG	FROM	TO	FOR	CONDUIT & CONDUCTORS	NOTES
1	PANEL "C-SSP"	PANEL FEP	208V 3PH POWER	2" C, 4#10 & 1#6G	
P1	PANEL FEP	GASOLINE DISPENSER 1&2	120V CONTROL POWER - SWITCHED NEUTRAL BREAKER	3/4" C, 2#10 & 1#12G	
P2	PANEL FEP	GASOLINE DISPENSER 3&4	120V CONTROL POWER - SWITCHED NEUTRAL BREAKER	3/4" C, 2#10 & 1#12G	
P3	PANEL FEP	GASOLINE DISPENSER 5&6	120V CONTROL POWER - SWITCHED NEUTRAL BREAKER	3/4" C, 2#10 & 1#10G	
P4	PANEL FEP	GASOLINE DISPENSER 7&8	120V CONTROL POWER - SWITCHED NEUTRAL BREAKER	3/4" C, 2#10 & 1#10G	
P5	PANEL FEP	DIESEL DISPENSER 9&10	120V CONTROL POWER - SWITCHED NEUTRAL BREAKER	3/4" C, 2#10 & 1#10G	
P6	PANEL FEP	DIESEL DISPENSER 11&12	120V CONTROL POWER - SWITCHED NEUTRAL BREAKER	3/4" C, 2#12, 1#12G	
P7	PANEL FEP	TANK 001 GASOLINE SUBMERSIBLE	PUMP - 208V 3PH POWER, 20A/3P	3/4" C, 2#10 & 1#10G	
P8	PANEL FEP	TANK 002 SUPER GASOLINE SUBMERSIBLE	PUMP - 208V 3PH POWER, 20A/3P	3/4" C, 2#10 & 1#10G	
P9	PANEL FEP	TANK 003 DIESEL SUBMERSIBLE	PUMP - 208V 3PH POWER, 20A/3P	3/4" C, 2#10 & 1#10G	
P10	PANEL FEP	REMOTE E-STOP STATIONS		3/4" C, 2#12, 1#12G	
P11	PANEL FEP	OVERFILL ALARM	120V POWER	3/4" C, 2#12 & 1#12G	
P12	PANEL FEP	DIESEL ISLAND AIR STATION	120V POWER	3/4" C, 2#10 & 1#10G	
P13	PANEL FEP	GASOLINE CANOPY SIGN	120V POWER	3/4" C, 2#10 & 1#10G	
P14	PANEL FEP	DIESEL CANOPY SIGN	120V POWER	3/4" C, 2#10 & 1#10G	
P15	PANEL FEP	GASOLINE CANOPY ROOF DRAIN AND DOWN SPOUT DE-ICING	120V POWER	3/4" C, 2#10 & 1#10G	
P16	PANEL FEP	DIESEL CANOPY ROOF DRAIN AND DOWN SPOUT DE-ICING	120V POWER	3/4" C, 2#10 & 1#10G	
IS1	VEEDER ROOT PANEL	DISPENSER 1&2 SUMP LEAK DETECTOR VIA FEP	DISPENSER'S SUMP LEAK DETECTION, SUMP INTERSTITIAL SENSOR	1" C - (2) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS2	VEEDER ROOT PANEL	DISPENSER 3&4 SUMP LEAK DETECTOR VIA FEP	DISPENSER'S SUMP LEAK DETECTION, SUMP INTERSTITIAL SENSOR	1" C - (2) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS3	VEEDER ROOT PANEL	DISPENSER 5&6 SUMP LEAK DETECTOR VIA FEP	DISPENSER'S SUMP LEAK DETECTION, SUMP INTERSTITIAL SENSOR	1" C - (2) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS4	VEEDER ROOT PANEL	DISPENSER 7&8 SUMP LEAK DETECTOR VIA FEP	DISPENSER'S SUMP LEAK DETECTION, SUMP INTERSTITIAL SENSOR	1" C - (2) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS5	VEEDER ROOT PANEL	DISPENSER 9&10 SUMP LEAK DETECTOR VIA FEP	DISPENSER'S SUMP LEAK DETECTION, SUMP INTERSTITIAL SENSOR	1" C - (2) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS6	VEEDER ROOT PANEL	DISPENSER 11&12 SUMP LEAK DETECTOR VIA FEP	DISPENSER'S SUMP LEAK DETECTION, SUMP INTERSTITIAL SENSOR	1" C - (2) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS7	VEEDER ROOT PANEL	TANK 001 SUMP LEAK ALARM	TANK FILL SUMP LEAK DETECTION	1" C - (1) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS8	VEEDER ROOT PANEL	TANK 001 INTERSTITIAL SPACE LEAK DETECTION PROBE VIA FEP	TANK 001 INTERSTITIAL SPACE LEAK DETECTION	1" C - (1) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS9	VEEDER ROOT PANEL	TANK 001 LEVEL SENSOR VIA FEP	GASOLINE TANK 002 LEVEL	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
IS10	VEEDER ROOT PANEL	TANK 002 SUMP LEAK ALARM	SUPER GASOLINE TANK LEVEL		
IS11	VEEDER ROOT PANEL	TANK 002 INTERSTITIAL SPACE LEAK DETECTION PROBE VIA FEP	TANK 001 INTERSTITIAL SPACE LEAK DETECTION	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
IS12	VEEDER ROOT PANEL	TANK 002 LEVEL SENSOR VIA FEP	SUPER GASOLINE TANK 002 LEVEL	1" C - (1) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS13	VEEDER ROOT PANEL	TANK 003 INTERSTITIAL SPACE LEAK DETECTION PROBE VIA FEP	TANK 003 INTERSTITIAL SPACE LEAK DETECTION	1" C - (1) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IS14	VEEDER ROOT PANEL	TANK 003 LEVEL SENSOR VIA FEP	DIESEL TANK LEVEL	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
IS15	VEEDER ROOT PANEL	TANK 003 SUMP VIA FEP	TANK SUMP LEAK ALARM	1" C - (1) #18 TWISTED SHIELDED PAIR (1) #14 THWN GND CONDUCTOR	
IC1	SERVICE STATION MASTER INTERCOM STATION	DISPENSER 1&2 INTERCOM	INTERCOM BETWEEN TRAVEL PLAZA AND FUEL DISPENSERS	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
IC2	SERVICE STATION MASTER INTERCOM STATION	DISPENSER 3&4 INTERCOM	INTERCOM BETWEEN TRAVEL PLAZA AND FUEL DISPENSERS	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
IC3	SERVICE STATION MASTER INTERCOM STATION	DISPENSER 5&6 INTERCOM	INTERCOM BETWEEN TRAVEL PLAZA AND FUEL DISPENSERS	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
IC4	SERVICE STATION MASTER INTERCOM STATION	DISPENSER 7&8 INTERCOM	INTERCOM BETWEEN TRAVEL PLAZA AND FUEL DISPENSERS	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
IC5	SERVICE STATION MASTER INTERCOM STATION	DISPENSER 9&10 INTERCOM	INTERCOM BETWEEN TRAVEL PLAZA AND FUEL DISPENSERS	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
IC6	SERVICE STATION MASTER INTERCOM STATION	DISPENSER 11&12 INTERCOM	INTERCOM BETWEEN TRAVEL PLAZA AND FUEL DISPENSERS	3/4" C - (1) #18 TWISTED SHIELDED PAIR	
SP1	EXISTING BUILDING MOUNTED WIREWAYS	DISPENSER 1&2	SPARE CONDUIT	1" C WITH PULL ROPE	
SP2	EXISTING BUILDING MOUNTED WIREWAYS	DISPENSER 3&4	SPARE CONDUIT	1" C WITH PULL ROPE	
SP3	EXISTING BUILDING MOUNTED WIREWAYS	DISPENSER 5&6	SPARE CONDUIT	1" C WITH PULL ROPE	
SP4	EXISTING BUILDING MOUNTED WIREWAYS	DISPENSER 7&8	SPARE CONDUIT	1" C WITH PULL ROPE	
SP5	EXISTING BUILDING MOUNTED WIREWAYS	DISPENSER 9&10	SPARE CONDUIT	1" C WITH PULL ROPE	
SP6	EXISTING BUILDING MOUNTED WIREWAYS	DISPENSER 11&12	SPARE CONDUIT	1" C WITH PULL ROPE	
SP7	SPARE CONDUITS BETWEEN DISPENSERS		SPARE CONDUITS	(2)-1" C WITH PULL ROPE	

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Scale:

No.	Revision	By	Date

Designed by:

By	Date
DJP	4/24
Checked	HS
HS	4/24
Drawn	AK
AK	4/24
In Charge of	FCM
FCM	4/24

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
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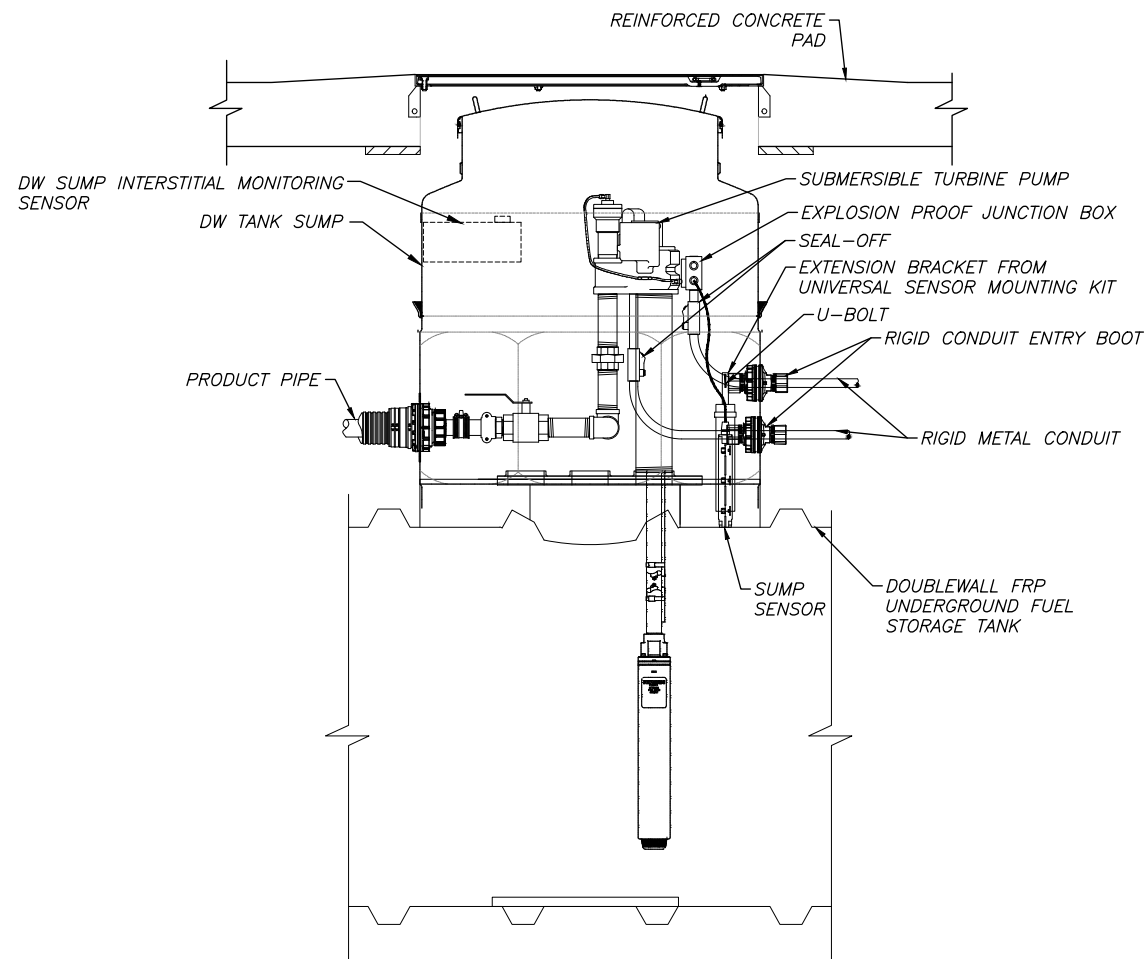
CONSULTANT PROJECT MANAGER:  
 Dale A. Mitchell, P.E.

**THE GOLD STAR MEMORIAL HIGHWAY**

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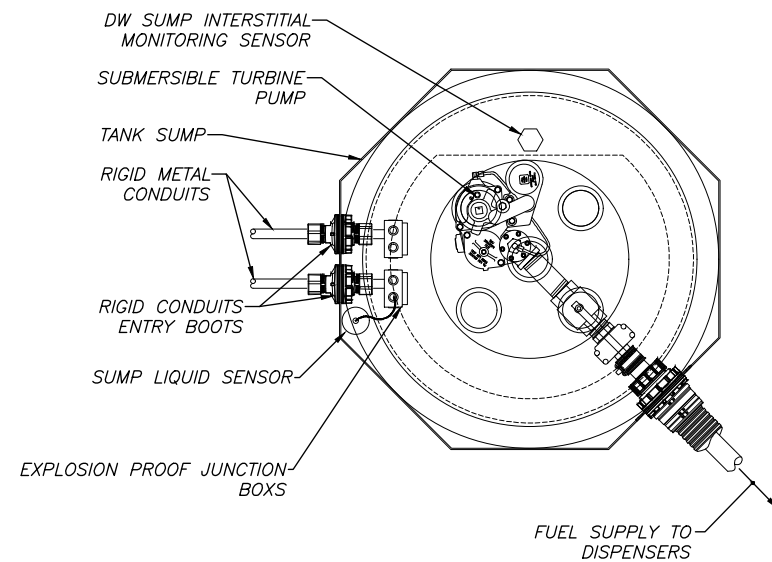
CUMBERLAND SERVICE PLAZA  
 FUEL SYSTEM REPLACEMENT  
 SOUTHBOUND MM 58.8  
 ELECTRICAL DETAILS & FUEL SYSTEMS CIRCUIT SCHEDULE

SHEET NUMBER: FS-E5  
 CONTRACT: 2024.11  
 45 OF 48



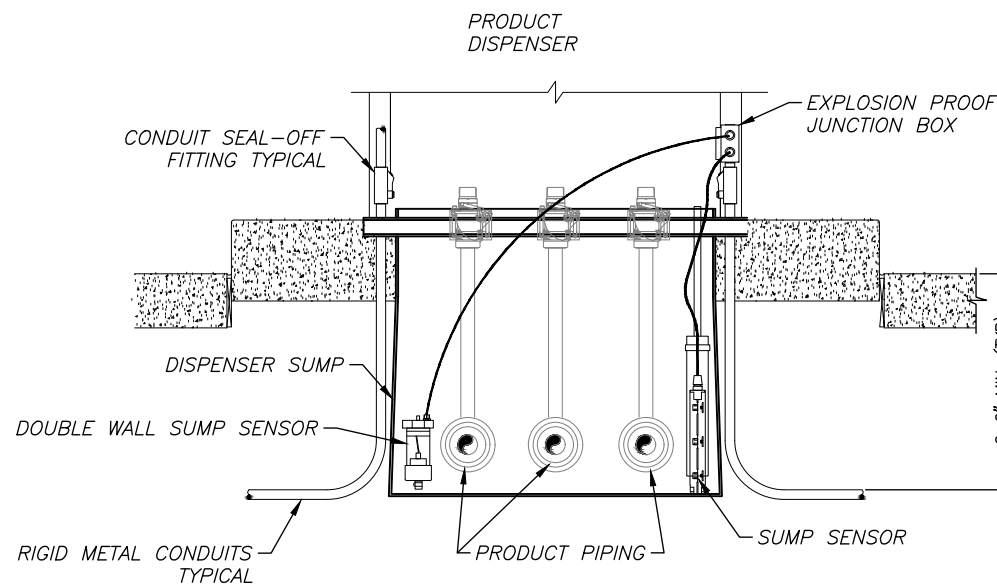
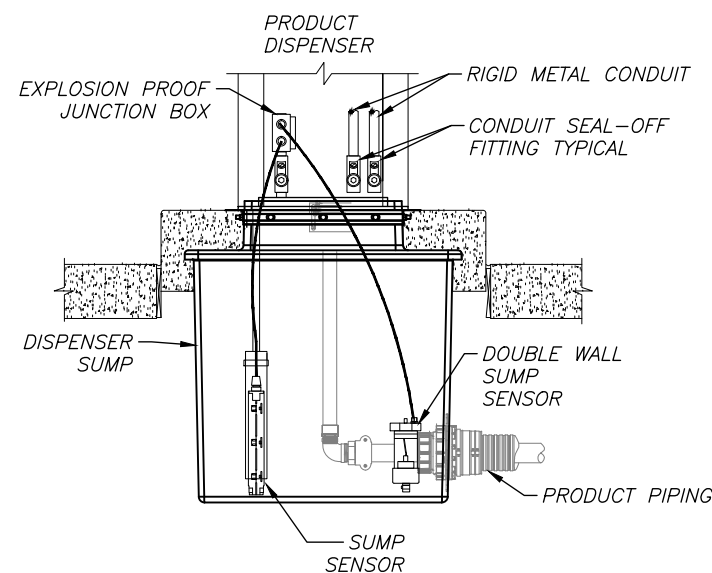
TYPICAL FUEL TANK SUMP DETAIL

SCALE: NONE



TYPICAL TANK SUMP PLAN VIEW DETAIL

SCALE: NONE



TYPICAL DISPENSER SUMP DETAIL

SCALE: NONE

Scale:

Designed by:



HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909



THE GOLD STAR  
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CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
SUMP ELECTRICAL PLANS

No.	Revision	By	Date

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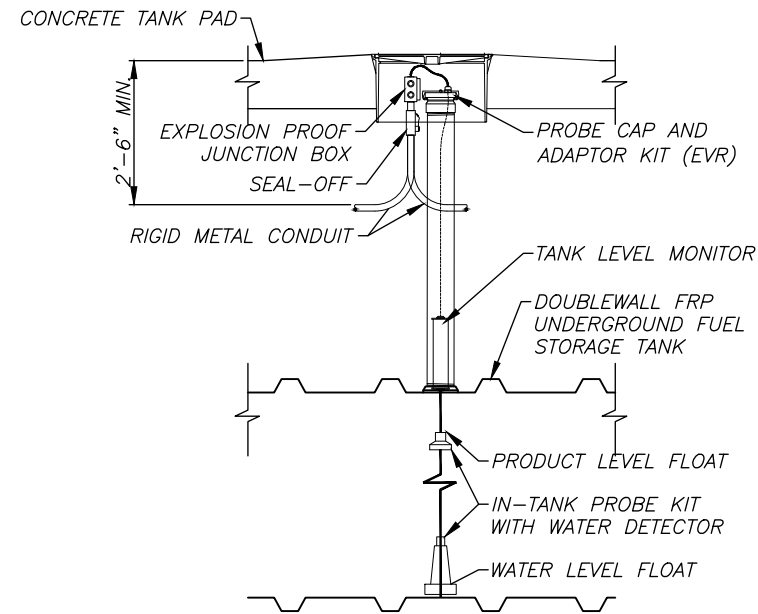
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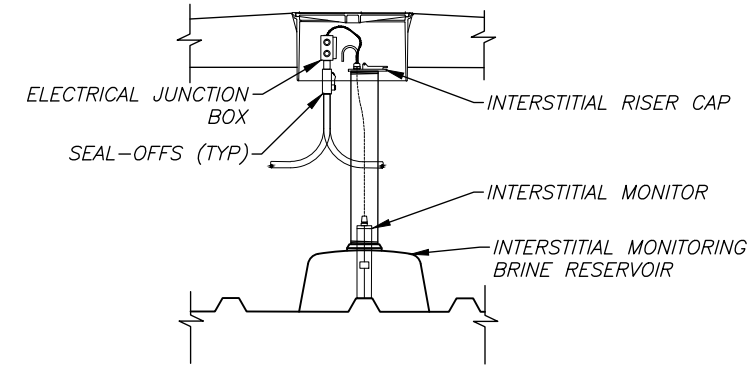
CONTRACT: 2024.11

SHEET NUMBER: FS-E6

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TANK LEVEL MONITOR  
SCALE: 3/8" = 1'-0" (11"x17")



INTERSTITIAL SENSOR DETAIL (BRINE)  
SCALE: 3/8" = 1'-0" (11"x17")


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Scale:			
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CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
FUEL TANK RISER ELECTRICAL DETAILS

SHEET NUMBER: FS-E7  
CONTRACT: 2024.11  
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**GENERAL ELECTRICAL NOTES:**

1. THIS DRAWING PROVIDED FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL PROVIDE POINT BY POINT LIGHTING CALCULATIONS, BASED ON IES ILLUMINATION RECOMMENDATIONS FOR SERVICE AREA LIGHTING, AND FIXTURE SHOP DRAWINGS FOR FINAL PROPOSED LIGHTING DESIGN FOR ENGINEER APPROVALS PRIOR TO ORDERING ANY MATERIALS.



RIM=304.37  
INV.OUT=300.07  
(18"HDPE OUT  
OF BASIN)

CALCULATION SUMMARY (BASED ON LSI FIXTURE #SCV-LED-10L-SC-UNV-DIM-40K-WHY-IMSBT1L, FIXTURE DIMMED TO 40% OUTPUT)					
AREA - (ILLUMINATION POINTS ARE ON 10' CENTERS)	AVERAGE FOOT CANDLE	MAXIMUM FOOT CANDLE	MINIMUM FOOT CANDLE	MAXIMUM/MINIMUM	AVERAGE/MINIMUM
GASOLINE CANOPY	14.4	20.9	7.1	2.9:1	2:1
DIESEL CANOPY	14.1	22.2	4.5	4.9:1	3.1:1

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Scale: Scale of Feet

No.	Revision	By	Date

Designed by:

**GPI** Engineering Design Planning Construction Management  
603.893.0720 GPINET.COM

Greenman-Pedersen, Inc.  
44 Stiles Road, Suite One  
Salem, NH 03079

	By	Date		By	Date
Designed	DJP	4/24	Checked	HS	4/24
Drawn	AK	4/24	In Charge of	FCM	4/24

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909

CONSULTANT PROJECT MANAGER:  
Dale A. Mitchell, P.E.

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ryan J. Barnes, P.E.

CUMBERLAND SERVICE PLAZA  
FUEL SYSTEM REPLACEMENT  
SOUTHBOUND MM 58.8  
CANOPY LIGHTING ILLUMINATION LEVELS

SHEET NUMBER: FS-E8  
CONTRACT: 2024.11  
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